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THEORIES OF EVOLUTION.

The Origin of Species. By CHARLES DARWIN, M. A., F. R. S. London: 1860. 5th Edition, D. Appleton & Co. New York: 1871.

The Descent of Man, and Selection in Relation to Sex. By CHARLES DARWIN, M. A., F. R. S., with Illustrations, 2 vols. D. Appleton & Co. New York: 1871.

On the Genesis of Species. By ST. GEORGE MIVART, F. R. S. New York: D. Appleton & Co.: 1871.

Lay Sermons, Addresses and Reviews. By THOS. HENRY HUXLEY, LL. D., F. R. S. D. Appleton & Co. New York: 1870.

About a year ago, (September 16, 1870,) Prof. Tyndall delivered an address at the Annual Meeting of the British Association, at Liverpool, on the subject of the "Scientific Use of the Imagination." Spoken before a popular assembly, it was adorned with all the semi-poetical graces of rhetoric and fancy, for which the new English school of modern Science is becoming quite celebrated in its efforts to popularize what have always been regarded as rather dry and laborious researches. We can hardly suppose that the Professor intended to announce anything new in the methods of scientific investigation. The illustrations he gives are drawn from

the past as well as the present, and only go to show that any man in the course of his studies may be led to anticipate or *conjecture* certain results which he afterwards verifies by experiment. In the sense in which he uses it, imagination is reduced merely to the power of *guessing*, and so of contriving a wider variety and more ingenious description of experimental processes. Though not quite identical with that faculty divine which

> "gives to airy *nothings*
> A local habitation and a name,"

and which is almost synonymous with *creation*,—that which originally gave meaning to the word *poet*—yet, in the restricted sense here attached to it, it gives great advantage even to those scientific minds which have been trained to wait for their facts before establishing their conclusions. No one can deny the service done by this "Scientific use of the Imagination," as for instance in the science of Astronomy, where some of its loftiest flights have been confirmed by the wonderful revelations of spectrum-analysis. Thus it is, we sometimes say that the *guesses* of Newton were often better than the demonstrations of inferior minds, as when he assumed the combustibility of the diamond, and the undulatory theory of light, without those later facilities of verification which have since vindicated his *pre*-science.

Nevertheless, "*Hypotheses non fingo*" has, from the time of Bacon, been the motto of the Inductive Philosophy: and it is now not superfluous to say, with such books before us as we have named at the head of this article, that any attempt to relax the severity of this maxim will at once lay our modern science open to all the objections and ridicule that were ever heaped upon the mediæval devotion to Aristotelian logic as an in-

strument of knowledge. And doubtless there is danger of variation from the hitherto established rigor of the inductive rule, even if we may not take Prof. Tyndall's oration as a plea or an apology for such a departure. There is danger of exchanging the proper attitude of scientific skepticism for what we may call a sort of scientific *credulity*. The progress of discovery has been so rapid of late years, and the triumphs of scientific research so brilliant, that a glamour of something like "mutual admiration" seems to have come over the minds of many of our eminent savans, which leads them even to hail each other's theoretical speculations beforehand; and in fear or impatience of being anticipated in the arrival at final truths, allows them (by imagination) to jump to the conclusion of problems that have really not been half worked out. The popular mind, too, which, from the swift succession of new and startling discoveries, has almost lost the capacity of being surprised, is prepared to accept almost any announcement from such authority, without inquiring whether it be a mere theory of "imagination," or a truth established by the unquestionable evidence of "all the facts."

Yet the discoveries of our day are not the sole and sudden acquisition of modern science alone. They were preceded and prepared for by the slow, laborious toil of previous generations of scientific thinkers and observers, who laid the lower courses of that vast pyramid which has exalted us to such a wide view of the universe. Every step of progress has depended upon a thousand preceding steps. This reflection should make modesty and humility the most appropriate mental attitude for even the master minds of modern science. That which is already known also still bears small proportion to that which remains to be known. We may

perhaps be sure of that which we already know; but after all, from the nature of the case, that which is still *incomplete* must be still *inconclusive*. It cannot be characteristic of a really scientific mind to push the conclusions of any mere partial, limited, or temporary induction to cover a field wider than was ever brought under human observation, unless indeed it be accompanied with the avowal that the province of science is exchanged for that of the "imagination." The mighty mind of Newton was almost childlike in its utter forgetfulness of self-assertion. To use his own figure, in all that wonderful pathway of discovery in which so few of his own age could follow him, he "felt like a child picking up pebbles on the shore of the Infinite."

To this "scientific use of the imagination" may perhaps also be relegated another striking feature of much of our modern science—we mean the fascinating *literary* dress in which it is so acceptably presented to the public. Science is no longer exhibited to the popular mind as a dry, severe comparison of facts and figures, as bare of ornamentation or extraneous considerations of mere æsthetic interest or attractiveness as it is possible to make them. The "dry light" of Heraclitus and Hegel is not the most popular illumination of our modern science. It comes to us in all the garnish of classical style and poetic illustrations, and shows sometimes the roseate flush of an earnest *animus* and argumentative eloquence. Even where its very purpose would seem to be to overthrow some of the most cherished traditions of mankind, it speaks with an air of injured innocence of the bigotry of those who demand impossible demonstrations of things, whose sufficient recommendation, we suppose, ought to be that they are astonishingly novel and startling.

Closely allied with this literary finish and ability

comes in an insidious and insensible dogmatism, which tacitly assumes the habitual air of authority so willingly accorded by the popular mind to an acknowledged literary cleverness. Fine writing will ever go far to disguise the deficiencies of ratiocination, and that charm of style which chains admiration and sympathy will enable us easily to bridge over an immense hiatus of proof with a very few isolated facts, and very many plausible *probabilities*. In view of the tone and manner lately assumed in some scientific "lay *sermons*," we can hardly wonder at the following recent declaration from a pulpit: "Dogmatism, which for centuries droned upon the standards of the theological army, has taken flight and perched upon the banners of the scientists, where it is very noisily flapping its wings. The scientists are the dogmatists of our time, while the theologians are faint-hearted and humble. The former know how few are competent to examine their processes and test their conclusions; hence they assert rashly, and do not hesitate to take vast leaps over pure vacancy."* This may seem a little severe, and a rather unsatisfactory example of the alleged "faint-hearted and humble" condition of the theologians; but from the last sentence, we might fancy the preacher had in his mind that specimen of saltatory logic by which Mr. Darwin concludes that the "arboreal animal with pointed ears and a tail," which he figures as the remote ancestor of mankind, had a still further *marsupial* origin.

This dogmatism, almost unavoidable when we come to fill up those long gaps or lacunae in the record of observed facts by a resort to the "Scientific Imagination," has been wittily if not quite fairly hit off by some versifier in recent numbers of *Blackwood's Maga-*

*Rev. J. S. Kidney, before a convention at Albany.

zine, the continual refrain of whose rhapsody is,—very characteristically, when one considers that the subject necessarily transcends all records of human experience,—

"Which nobody can deny." *

Of course, ridicule has no province in questions of strict science; although it has been often freely used by men of science, in scientific controversies; and we find that writers of the school we are reviewing occasionally do not disdain it in their allusions to metaphysics and theology. We are told that "Darwinism" is largely accepted in Germany, as science: but the national habit of regarding all knowledge as in a state of transition, every theory or discovery as but a stepping stone to something else—in short, as Sir William Hamilton would have put it, the habit of looking at truth itself only as a sort of "hunted hare," the sole value of which consists in furnishing the pleasure of the chase—makes the Germans unsparing in ridicule as well as criticism of any gaps they may discover in intellectual reasoning, fond of mere abstract speculation as they are; and no doubt their intellectual and speculative habits, destitute of sentiment, cause them really to enjoy with a keen sense of appreciation,

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* *Blackwood* for May, 1861, and April, 1871. From the latter we give the two stanzas relating to the point just mentioned:

"Our arboreal sire had a pedigree too,
The Marsupial system comes here into view,
So we'll trace him, I think, to a great Kangaroo,
Which nobody can deny.

The Kangaroo's parent, perhaps, was a bird,
But an Ornithorhyncus would not be absurd,
Then to frogs and strange fishes we back are referred,
Which nobody can deny."

the awkward dilemmas, and puzzling situations into which "science" sometimes flounders.*

That these preliminary considerations are not entirely out of place, will be evident to any one who has read Prof. Huxley's essays, and marked the peculiarities of his style toward those who seem to desire the recogni-

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*At a meeting of a Scientific "*Versammlung*," at Frankfort, in 1867, some American visitors give an account of the "convivialities," at which several pieces were sung from a "Scientific Song Book," prepared by Dr. Hoffmann Donner, of the well known Asylum for the Insane near that place.

The following are two or three stanzas from one of them entitled "The Gorilla's Lament."

Ah, woe is me! what have I learnt?
In childhood, by ignorance blest,
I believed, but in vain, that the prize I should gain,
The monarch of monkeys confest.
Now urged by the cursed desire to be wise,
I've gained the rebuke of my vanity,
My development ceased, and has left me a beast,
An unfinished piece of humanity!

Du Chaillu, you first of the gang,
You Darwin, just look out for squalls;
Carl Vogt, through your preaching and wide spreading teaching,
On me all this misery falls.
Well, let me but catch you, knights errant of truth,
All three of you hear what shall hap;
Your fine skulls I'll dash into splinters, and smash
Your developed brains into pap!

One thought alone comforts me still,
And breathes a sweet peace on my woe,
From agonized raving, insatiate craving,
The path of contentment to show.
No ape to humanity ever attained,
I endure it as well as I may,
Not a murmur escapes, for, while men become apes,
A quiet gorilla I'll stay.

tion of a divine Intelligence as continuously acting in the operations of nature. Prof. Huxley also expressly declares that the Baconian method of induction is not adequate for all scientific investigations. He quotes Mr. Mill on the "Deductive Method" to prove that "there are multitudes of scientific inquiries in which the method of pure induction helps the investigator but a very little way." Mr. Mill describes the "deductive method" to be used in connection with the more complex phenomena to which the direct methods of observation and experiment are inapplicable, as consisting of *three* operations: "first, one of direct induction; the second, of ratiocination; and the third, of verification." Prof. Huxley adds: "Now, the conditions which have determined the existence of species are not only exceedingly complex, but so far as the *great majority* of them are concerned, are *necessarily beyond our cognizance.* But what Mr. Darwin has attempted to do is in exact accordance with the rule laid down by Mr. Mill," &c. ["*Lay-Sermons,*" p. 263.]

We suppose it would be recognized by most of our readers as obvious, that the term *science*, when used in connection with questions of physics or the study of material nature, carries a very different impression to our minds from that which we derive from the words "metaphysics" or even "ethical science." And this for the very reason, that the subjects and conditions of the latter are hardly within "our cognizance" in the same sense as those of the former are. It has always been the boast of physicists that their specialty is distinguished for the demonstrable certainty of its conclusions, reached as they are by the inductive method: and it is not to be denied that the students of natural science have been rather disposed to disparage the abstract speculations of metaphysics, such as distin-

guished the old philosophers and schoolmen, who were so ardently devoted to the Aristotelian logic of "deduction" as the only instrument of pure reason, and the only certain means of knowledge. Indeed we believe it is a theologian who has furnished the wittiest characterization of the old philosophic methods. "The schoolmen," says old Fuller, "are like the London merchants, who having little space on the ground, *build up a good many stories in height;*" make up in towering speculations what they lack in the substratum of knowledge.

Is it anything like this that the new departure from the inductive method alone is to introduce into modern science? We believe there has been no "development," much less "transmutation" in the instrument of "ratiocination" since the days of Bacon and Descartes, or even of Plato and Aristotle. It may be that psychical or biological investigations will eventually supply us with the "missing link" between physics and metaphysics; but so far as we can see at present, any theory involving such "complex conditions necessarily beyond our cognizance" as renders it dependent almost wholly upon "ratiocination" in regard to "probabilities" and "analogies," must be relegated to that category of abstract subjects, upon which there can only be endless debate, and various "schools," according as men have been able to use their powers of "ratiocination" or imagination.

We smile at the ancient Cosmogonists and the scanty materials they had upon which to carry out their "ratiocination;" but when we enter upon questions involving conditions *necessarily* beyond all human cognizance, and construct our theories where an adequate induction of facts is impossible, are we not following their example into the path of mere abstract speculation? Leaving out the historical Revelation of the fact

of creation—"specific" it must have been, if any—supposing that science alone is sufficient for all things—is it much easier for us to build a world with the "bellows and anvil" of our "ratiocination," than Cicero says it was for the earliest philosophers of Greece? For it is worth while to observe that the first efforts of philosophy were not directed to dealing with abstruse questions of metaphysics alone, but rather to questions of cosmogony and theogony. And we can not resist the temptation to call attention to something of a resemblance between the methods of the ancient and modern cosmogonists. Perhaps there can hardly be a theory on this subject which the former have not touched or approached. Here we can not help sympathizing with the exclamation of Dr. Tayler Lewis, in a paper recently read before the "Convocation" of the University of the State of New York. We continue the extract somewhat beyond the point under discussion, as an argument for that acquaintance with the whole history of human thought which alone can qualify us to judge the bearings of any system or product of science that claims to be new.

Oh, for one like Ralph Cudworth, to beat down the errors of the day as he smote Hobbes, some modernized form of the same intellectual giant to put to silence the Darwinism and Spencerianism of our times, by showing how much more acutely all their speculations in the science-transcending spheres of life, and world-making, were thought out by certain ancient minds, and how thoroughly it was refuted by others—or what a close parallel there was between the old hylozoism and the modern doctrine of protoplasm; or between the infinite "congruities and incongruities," the infinite hits and the infinite misses in infinite time of Democritus, as compared with the same thing now passing under the name of "natural selection!" What a service again would he do who should show how applicable yet are the popular maxims of the ancient legislators, theoretical and practical, to our crude politics. We can barely hint at this. Such a *practical* position occupied by classical men, thus

making a most *practical* use of their studies by bringing them to bear on the questions of the day, would, more than anything else, put to silence the common objection to their inutility. In another aspect it might be said that it would furnish the strongest stimulus to higher excellence in this department of knowledge. This seeking for hidden treasures, with the assurance not only of discovering, but of finding a rich and ready market for its products, would be all that is needed to give the study of the ancient literature the place it deserves in all our higher education.

It is thus advisedly that we speak of a "resemblance," and recall the tendency of human speculations as such to revert to some former type. The earlier cosmogonists like Anaxagoras, as did Plato after him, believed the world to be the work in some manner of an infinite Mind; but the Epicurean philosophy, which became the accepted doctrine with most of the "men of science," as well as the literary and ruling class of the ancient civilization, managed to banish God out of the universe, and traced every thing to the operation of some natural laws, or "forces" as they would now be called,—to the perpetual flux and fortuitous concourse of "atoms." In that remarkable work, "*De Natura Deorum*," Cicero makes a professed disciple of this philosophy thus state some of its principles:

The philosopher (Epicurus) from whom we received all our knowledge hath taught us that the world was made by *Nature;* that there was no occasion for a work-house to frame it in; (or a mind to frame it, as had been said.) And that though you deny the possibility of such a work without divine skill, it is so easy to her, that she has made, does make, and will make innumerable worlds. But because you do not conceive that nature is able to produce such effects without some *rational aid*, you are forced, like the tragic poets, at a loss for a conclusion, to have recourse to a deity (run to a God!) whose assistance you would not seek, if you could view that vast and unbounded magnitude of regions in all parts, where the mind, extending and spreading itself, travels so far and wide that it can find no end, no extremity to stop at. In this immensity of breadth, length and height, an infinite power

of innumerable atoms is in agitation, which, notwithstanding the interposition of a void part of space, meet and cohere, and continue clinging to one another. By this union those modifications and forms of things arise, which in your opinions could not possibly be made without the help of "bellows and anvils." Thus you have imposed on us an *eternal Master*, whom we must dread day and night. For who can be free from fear of a Deity who *foresees*, *regards* and *animadverts* on every thing: one who *thinks all things His own*— a curious, *ever-busy* God?" [Book i., xx.]

In this extract, one can discern a sort of anticipation of many modern speculations, from the "nebular theory" down to "protoplasm;" but one would hope there are very few who would so openly confess the desire to get rid of the cognizance of an all-seeing and *ever-working* God, as Cicero's Epicurean has done in the last sentence. Epicurus certainly did not venture to deny the existence of a God. The interlocutor in this dialogue, whom we have quoted, is reminded, soon after, that the notion of Gods was so *naturally* and indelibly impressed upon the minds of all men, that any atheist would certainly have been banished from Athens; but Epicurus wished only to put God out of *any relation to or concern with this mundane system of things;* and this, it is maintained also, if not atheism essentially, is at least a destruction of all religion.*

* Every scholar will recall the "*De Rerum Natura*"—in some respects the most remarkable work of classical antiquity, in the majesty and music of its awful creed, by Lucretius, the Poet of the Epicurean philosophy. In marvelously elaborate detail he sings the evolution of all forms out of primordial atoms, and even that "struggle for existence" through the blind pressure and competition of the powers of Nature, which forms the essential principle in the system of Darwin, comes out distinctly in his verse:

> "Multaque tum interiisse animantum secla necesse est
> Nec potuisse propagando procudere prolem.
> Nam, quaecumque vides vesci vitalibus auris
> Aut dolus, aut virtus, aut denique mobilitas, est,
> Ex ineunte aevo, genus id tutata reservant.
> Multaque sunt, nobis ex utilitate sua quae
> Commendata manent, tutelae tradita nostrae."
>
> (*Book V., see the whole context*, 846-875.)

Science, it is said, has nothing to do with consequences: its sole end should doubtless be to ascertain and demonstrate the truth; but any *theory*, involving consequences of the last importance to mankind, so long as it can claim only to be a theory with partial inductions of facts in its favor, must submit to be treated with rigorous scrutiny, must be compelled to reconcile the facts that are inconsistent with it, and must leave no scientific objection unanswered. It can not be said to have established itself until it has done all this: and even then it must be subject to the possibility of that fate which the further progress of scientific investigation has brought, and may bring, to many an accepted theory before it.

Nothing of course is more unfair than to raise moral objections and prejudices against single-minded seekers

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"Many kinds of animal life too must then have perished, not having been able to continue their species by propagation: for whatever creatures you see breathing the vital air, assuredly either craft, or courage, or at least, activity, has preserved their race, defended from the beginning of its existence. And there are many which, from their usefulness to mankind, remain as it were intrusted to us, and committed to our guardianship."—(*Watson's translation.*)

Tennyson has, in describing the suicide of Lucretius, finely entered into the gloomy but sublime spirit of his poetry:

> And therefore now
> Let her that is the womb and tomb of all,
> Great Nature, take, and forcing far apart
> Those *blind beginnings that have made me man*,
> Dash them anew together at her will
> Through all her cycles—into man once more,
> Or bird, or beast, or fish, or opulent flower—
> But till this cosmic order everywhere
> Shattered into one earthquake in one day
> Cracks all to pieces—and that hour perhaps
> Is not so far when momentary man
> Shall seem no more a *something* to himself,
> But he, his hopes and hates, his homes and fanes
> And even his bones long laid within the grave—
> The very sides of the grave itself shall pass
> Vanishing atom and void, atom and void,
> Into the unseen forever.—" &c., &c., &c., —*Lucretius.*

after scientific truth, as respects themselves personally; but surely this principle does not apply to their *theories*, which in point of fact may be materialistic, pantheistic or atheistic, according to their logical results, whatever their propounders intended, if indeed a truly scientific mind can be said to *intend* anything. Locke was a professed Christian himself, while his theory of sensation led to atheistic results. The French have sometimes boasted that their country was always the practical theatre for putting to the test of experiment whatever theories were started in any other part of Europe: and there is demonstrable truth in the assertion that the French Revolution of 1793, was the legitimate result of carrying out to their last expression the principles of the philosophy of Locke.

Much of the language of the recent literature of science implies a certain *theory* in regard to the origin and existence of all things which is just as distinct and positive as the Epicurean philosophy, whether the writers mean it or not, or whether they are willing to acknowledge it or not. Surely those who are accustomed to push an induction of facts to the farthest conclusions it will warrant, ought not to be afraid of admitting the logical meaning of their own use of such expressions as "nature," "force," and "principle of life," for neither of which, by the way, has *science* as yet furnished any satisfactory definition.

It may be said that to remove an intelligent agent out of the present operations of the universe, back to some remote and unimaginable *beginning*, is not denying the existence of a God, but recognizing it; but we must agree not only with what Cicero makes Cotta say of the Epicurean doctrine of God, but also with what a recent Edinburgh Reviewer declares of the real magnitude of the issue involved in the theory of evolution

as presented in Mr. Darwin's system of natural and sexual selection, and applied to mankind:

"If our humanity be merely the natural product of the modified faculties of brutes, most earnest minded men will be compelled to give up those motives by which they have attempted to live noble and virtuous lives, as founded on a mistake: our moral sense will turn out to be a mere developed instinct, identical in kind with that of ants or bees; and the revelation of God to us, and the hope of a future life, pleasurable day dreams invented for the good of society. If these views be true, a revolution in thought is imminent, which will shake society to its very foundations, by destroying the sanctity of the conscience and the religious sense; for sooner or later they must find expression in men's lives." (Descent of Man. *Ed. Rev.*, July, 1871.)

It will not be regarded as going out of our way, if we here submit a compact logical statement in regard to the use of certain terms in scientific language, which goes to show not only the importance of exactness and definiteness of meaning in our use of words, but also the remarkable ulterior results that may sometimes be involved in phraseology that is familiar enough and may appear to be carrying us along the path to new acquisitions. It is taken from a brief monograph by Prof. Wilson, of Cornell University, which we the rather place on record here, as it has appeared only in the columns of a weekly newspaper. We commend it to our scientific readers as a specimen of that kind of test which ought to be applied to the speculations that relate to "complex phenomena, involving conditions necessarily beyond our cognizance," more frequently than it is. The occasion of the article was an attempt of President Hopkins, of Williams College, in a public discourse, to meet and criticise some of the biological views of Prof. Huxley.

Dr. Hopkins says: "Thirty years ago I said in a public discussion that 'the principle of life is one of the great principles of nature,' and 'when we see it acting with the same uniformity

and at times with the same apparent blindness as the other powers of nature, we can neither doubt that it is to be ranked as one of those powers, nor that it is among the greatest and most striking of them.'"

Now in this, President Hopkins is admitting in substance what he denies in special form. He leaves the root of the tree flourishing underground while he lops off one or more of its branches. In fact, philosophy, as thus far presented to the world, seems to me like an immense underground root—*quack grass*, if you choose to call it so—which is continually sending up its shoots, and however diverse in form, or in the location from which they start, have, each one of them, one or another of two kinds of fruit, and two only—*pantheism* and *materialism*—both of which are practically and in the only sensible sense of the word, atheism. ("Atheism" being negative can have only this relative meaning—the denial of God—that is, the One true God.)

For Dr. Hopkins, as indeed for Prof. Huxley, I have the highest regard. Dr. Hopkins needs no praise of mine. He is regarded as one of the cleverest, deepest thinkers, and most forcible writers of the age. In this opinion I fully concur. I think he well deserves the reputation he has acquired.

But I wish to criticise him a little and ask him a few questions:

Does he believe that there is "a principle of life" at all? Can he tell us what it is? give us any proof of its reality? He calls it "a power," "a formative force," and says that of it "we know nothing." Then, of course, we, as men of thought and as speaking truth instead of writing poetry and fable, can say nothing of it, and that of which we can say nothing, and know nothing is, *for us*, nothing.

The word "principle" is used in two senses. In one it is a general term including abstractions, as when we speak of the principles of grammar, of logic, of geology, &c. In the other it is also a general term; but as such it includes a class of things denoted by concrete terms, and which are more commonly called "elements." As the "first principles or elements" of matter.

Now, manifestly, Dr. Hopkins does not mean to use the word "principle" when he speaks of "the principle of life" in the first sense of the word, for principles in that sense are truths. Does he really mean to use the word in the second sense? If so, which of the principles does he mean? Let him tell us precisely, and his doctrine will doubtless become either senseless,—too obviously so to need or allow of refutation, or it will become too obviously true to need proof or admit of denial.

A "principle" is in any view a "first thing." If now we start with the *material* objects around us we arrive, by chemical analysis, at the sixty-four or five principles or elements, oxygen, carbon, iron, &c., &c. Then, proceeding in the direction of synthesis, we have the hundreds of minerals and the scores of organic colloids, &c., and *of these the material world is made up*, every object and reality in it. Each object is a cause and a force. It does something to others around it; it attracts or repels; it heats them or cools them, &c., &c. But "attraction," "heat," and "cold," are but abstract terms. They do not denote things, they are not true causes.

If we start with thought we are led to mind, to one for each thinking being, and hence we have "principles" or first things, and in turn we have "mind" and "body." Nothing else. The body and each of its parts, organs and tissues, lives and grows and decays. Nay, this is true of each cell and even of each molecule in a cell. It lives, grows, developes, &c.

So, too, the mind thinks, *it* perceives, *it* reasons, *it* remembers, &c., &c. But beside and beyond the two—mind and body—there is nothing in man; no reason that reasons; no memory that remembers; no will that chooses; no "principle of life" that developes the form, "breaks up strong cohesions, picks the lock of chemistry, gives the shell in the sea its voluted form," &c. If there is *any* thing besides mind and matter in man, it is God.

For, in the third place, we can start from the phenomena of nature and prove from them, by the closest analysis, that these phenomena, as phenomena of mere inert matter, imply a non-inert, or spontaneous Being, existing before any of the phenomena of matter were possible and as a cause of them, the antecedent condition of their possibility.

And these three are all: God, who is one; Minds, which may be numerous, as it shall please God to make them; and Matter, or rather material things, considered as either (1) chemical elements, or (2) mineralogical compounds, or (3) organic cells and tissues.

Now which of these is "the principle of life?" To which of the three categories of existence does it belong? To the first? then it is God. To the second? then it is a rational, personal agent, *who* is it? To the third? then it is a cognizable substance; it has objective properties, as color, form, density, &c.; it *can have*, if it has not, a specific name. *What* is it?

We can make a fourth category that will be co-ordinate to these three only by abstraction or fancy—some process that does neither

prove nor imply the reality of its objects. We have sense-perception, sight, touch, &c., and this gives us *material* objects: the chemical elements and the mineral and organic compounds. We have consciousness, and this gives us, Mind—each one his own, and thus by generalization, one for each man. We have insight, and this, by analysis, leads us to the cognition of a One who is *above* all else, *before* all else, and *substantially* different and distinct from all else—God over all blessed forever. If He does not exist, then existence is impossible. If they exist, His being and attributes cannot be denied.

But if we would make any other category or class, except by a subdivision of these three, or some one of them, we must proceed by either abstraction or fancy.

(1.) By abstraction and objectification, as, when we see a white object, we speak of "*whiteness*," or an attracting object, and speak of "attraction," a heated object, and speak of "heat," a living object, and speak of "life," or "a principle of life." But these things are not real; they are not *things* at all—they are mere abstractions—objectified abstractions.

(2.) By fancy, we may think and suppose objects like the gods of the heathen mythologies, the monsters of their fables, the elves and fairies of mediæval superstitions. But they are unreal. We have no proof of their existence and no sensible man believes that they exist.

Now to come to the phenomena of life, or rather of living things. What have we? Certain elements,—oxygen, carbon, hydrogen, nitrogen, &c.,—unite in the form of a cell and *live!* Can any one tell how they unite? Perhaps they observe the laws of chemical affinity. But this is mythology again. Perhaps in uniting they attract and repel as they do in forming the crystaline compounds of the inorganic world. But what makes them *live?* Is there a "principle of life" with creative godlike power, that makes these cells living tissues, organic masses, plants, animals and men, to differ from mere inorganic objects in the mode of their existence? If so, let us fall down and worship it; for it is verily the God that made us. We need no other. We can know of no other. We can, truthfully, acknowledge no other. But if not, let us say as I do most emphatically say, God, the Author of Revelation, is the Agent and cause, that makes them to live, and their life is proof of His existence, as much as motion is even proof of a moving cause, as creation itself is proof of a creator.

If now we acknowledge this Agent to be God—the God whom we worship and adore, we are theists. If not, and we call what there is in the phenomenon, matter, we are materialists; if we objectify the abstractions that we can make from what is observed, confounding substance with property and mere mode, we are pantheists, howsoever we may name or misname our pantheism. And in either case, as materialists or pantheists, we are *atheists* in the only real sense of the word. We deny that which alone is God, and as an inevitable consequence we *deify*, that is make a god or something that we shall call one, out of something else. If that something be matter simply, we are materialists; if it be an objectified abstraction, we are pantheists.

But no man is a mere materialist. Even Huxley and all of that school objectify abstractions. They make light and heat so to be "the powers" and "forces" of nature, as Dr. Hopkins does "the principle of life." And the difference is really this: the materialist objectifies the *properties of matter*, as "heat," "light," "electricity," &c., and the pantheist objectifies *thought*, the actions and *states of the mind*, calling them "ideas," and then both alike proceed to make "gods" of the "objects" they have thus made.

Now we touch bottom, and cut up this prolific root of all or nearly all speculative error, when we acknowledge and accept the fundamental principle that in every scientific or didactic statement in anything that is not mere poetry and myth, no abstract term can be made the grammatical nominative to any verb except the simple verb "*is*" or "*are;*" for the moment we make such a use of an abstract term, we objectify the abstraction, make of it a substantial thing, a real cause, "power" or "force," and have admitted a principle by which all the facts and phenomena that men can know, can be explained and accounted for without the recognition of God, or finding any proof of His existence. My principle will be hard on poetry; it will spoil mythology, but I trust it will give us some common-sense, life-giving theology [or other science.]

All mere *theories* then, must be content to be subjected to some such process as this; and any theory relating to the origin of organic beings may possibly involve all the old metaphysical discussions which schoolmen have expanded out of the hints of ancient philosophers, both heathen and Christian, from Thales to Augustine, about *Creatianism* and *Traducianism*, the *Immanence* of Di-

vine Essence in Nature, or that *Transcendence* which supposes the original Maker to have imposed all its qualities upon matter, according to which every thing has gone on from the impulse originally bestowed.

It is sufficient to have barely indicated the variety of logical discussions and results, to which even a theory of the origin of mere animal organisms may give rise, without going further into detail.

Some readers may be disposed to complain, that in connection with a professed notice of the works at the head of our article, we should have referred to the theories of the ancient cosmogonists. We are glad to find that the recent Inaugural Address of Sir William Thomson, President of the British Association of Science, delivered at the late meeting at Edinburg, (Aug. 1, 1871,) which reached us after writing what has gone before, fully bears us out in such reference. He treats this whole subject of evolution as of course included in cosmical physics; and while with Prof. Huxley, not undervaluing the labors of Pasteur and others, he still adheres to Biogenesis "as an article of scientific faith, true through all space and all time, that life proceeds from life and from nothing but life," he also enters a noble protest against that quiet ignoring of a guiding Intelligence in nature and the argument of design, which seems to be too characteristic of the modern scientific theories of Darwin and others. It is refreshing to find that even in the British Association of this day of Advanced Science, the good old arguments of Natural Theology which found scientific statement as far back as the days of Xenophon's *Memorabilia*, are not regarded as wholly obsolete. The passage we refer to is the concluding paragraph of the address, and is as follows:

Darwin concludes his great work on *The Origin of Species* with the following words :—"It is interesting to contemplate an entangled bank clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent on each other in so complex a manner, have all been produced by laws acting around us. * * * There is grandeur in this view of life with its several powers, having been originally breathed by the Creator into a few forms or into one; and that whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms, most beautiful and most wonderful, have been and are being evolved." With the feeling embraced in these two sentences I most cordially sympathize. I have omitted two sentences which come between them, describing briefly the hypothesis of "the origin of species by natural selection," because I have always felt that this hypothesis does not contain the true theory of evolution, if evolution there has been, in biology. Sir John Herschel, in expressing a favorable judgment on the hypothesis of zoological evolution, with, however, some reservation in respect to the origin of man, objected to the doctrine of a natural selection, that it was too like the Laputan method of making books, and that it did not sufficiently take into the account a continually guiding and controlling Intelligence. This seems to me a most valuable and instructive criticism. I feel profoundly convinced that the argument of design has been greatly too much lost sight of in recent zoological speculations. Reaction against the frivolities of teleology, such as are to be found, not rarely, in the notes of the learned commentators on Paley's *Natural Theology*, has, I believe, had a temporary effect in turning attention from the solid and irrefragable argument so well put forward in that excellent old book. But overpoweringly strong proofs of intelligent and benevolent design lie all round us, and if ever perplexities, whether metaphysical or scientific, turn us away from them for a time, they come back upon us with irresistible force, showing to us through nature the influence of a free Will, and teaching us that all living beings depend on one ever-acting Creator and Ruler.

By way of illustrating further the moderate and conservative spirit that appears to have animated this meeting, as to the class of subjects here contemplated,

we add the following passages from the address of Professor Tait, President of Section *A*, embracing the department "of Mathematics and Physical Science."

There must always be wide limits of uncertainty (unless we choose to look upon physics as a necessarily finite science) concerning the exact boundary between the attainable and the unattainable. One herd of ignorant people, with the sole *prestige* of rapidly increasing numbers, and with the adhesion of a few fanatical deserters from the ranks of science, refuse to admit that all the phenomena even of *ordinary dead matter are strictly and exclusively in the domain of physical science.* On the other hand, there is a numerous group, not in the slightest degree entitled to rank as physicists—though in general they assume the proud title of philosophers—who assert that not *merely life, but even volition and consciousness, are mere physical manifestations.* These opposite errors, into neither of which is it possible for a genuine scientific man to fall, so long at least as he retains his reason, are easily seen to be very closely allied. They are both to be attributed to that credulity which is characteristic alike of ignorance and of incapacity. Unfortunately there is no cure—the case is hopeless—for great ignorance almost necessarily presumes incapacity, whether it show itself in the comparatively harmless folly of the spiritualist, or in the pernicious nonsense of the materialist. Alike condemned and contemned, we leave them to their proper fate—oblivion; but still we have to face the question—where to draw the line between that which is physical and that which is utterly beyond physics. And again our answer is—Experience alone can tell us; for experience is our only possible guide. If we attend earnestly and honestly to its teachings, we shall never go far astray. Man has been left to the resources of his intellect for the discovery not merely of physical laws, but of how far he is capable of comprehending them. And our answer to those who denounce our legitimate studies as heretical is simply this—A revelation of any thing which we can discover for ourselves, by studying the ordinary course of nature, would be an absurdity.

He concluded by endorsing the "noble words" of Prof. Stokes at Exeter:

"When from the phenomena of life we pass on to those of mind, we enter a region still more profoundly mysterious. * * * * Science can be expected to do but little to aid us here,

since the instrument of research is itself the object of investigation. It can but enlighten us as to the depth of our ignorance, and lead us to look to a higher aid for that which most nearly concerns our well-being."

There is a mighty difference between this language and the fiercely bitter objurgations of Prof. Huxley against "Bibliolatry" and the "Hebrew Cosmogony," which he shamelessly compares to the "coeval myths" of Osiris, and the life-breeding mud of the Nile. [*Essays*, p. 277.] The British Association will not turn over modern civilization once more to the "sty of Epicurus," or teach that the highest end of the "dust of Alexander" is to "stop a bunghole." After all these ages of historical realities, the human mind is not to be compelled to take up that attitude of despair, pictured by the Poet of our age, only that he may give it its proper answer:

Are God and Nature then at strife,
  That Nature lends such evil dreams,
  So careful of the type she seems,
So careless of the single life.
  * * * And he, shall he,
Man, her last work, who seemed so fair,
  Such splendid purpose in his eyes,
  Who rolled the psalm to wintry skies,
Who built him fanes of fruitless prayer,
Who trusted God was Love indeed,
  And Love Creation's final law,
  Though Nature, red in tooth and claw,
With ravin, shrieked against his creed—
Who loved, who suffered countless ills,
  Who battled for the True, the Just,
  Be blown about the desert dust,
Or sealed within the iron hills?
No more? A monster then, a dream,
  A Discord—Dragons of the prime
  That tare each other in their slime—
Were mellow music matched with him!

The answer is found in the subordination of "Science" to that "Wisdom heavenly of the Soul" which is the motive power of the higher and nobler part of man's nature. Of "Knowledge" it must be said:

> Half grown, as yet a child and vain,
> She cannot fight the fear of death,
> What is she, cut from love and faith,
> But some wild Pallas from the brain
> Of Demons? fiery hot to burst
> All barriers in her onward race
> For power. Let her know her place,
> She is the second, not the first.
> A higher hand must make her mild,
> If all be not in vain, and guide
> Her footsteps moving side by side
> With wisdom, "like the younger child."
>
> —In Memoriam, 54-113.

It is but proper to say here, that not all theories of evolution are liable to the same objections. As we shall see hereafter, Mr. Mivart proposes a theory of evolution which may be otherwise expressed as *derivative creation*, which is quite compatible with—nay, implies, a "guiding Intelligence," and final causes. But any theory which repudiates teleology must demonstrably end in the blank materialism of Lucretius and the Encyclopedists, and put its author into the category of those physicists who assert that not merely life, but even volition and consciousness, are merely physical manifestations—an error, into which, as Professor Tait says, it is "not possible for a genuine scientific man to fall, so long at least as he retains his reason."

Since Mr. Darwin has applied his theory to the origin of man, it becomes more necessary, or at least a matter of greater interest to re-examine his whole system. Many of those who at once embraced his theory of Natural Selection when first propounded, seemed to

suppose as a matter of course, that Mr. Darwin would not venture to include man among the "animals" in this respect; but that he would allow the vast differences between man and all creatures below him to be evidence of some separate origin, or a distinct creation; or at least, that if "community of descent" should be claimed for his bodily nature, yet his moral and intellectual nature, his gift of language, the sense of obligation, freedom of will, and other spiritual qualities would be granted a higher source than development out of a mollusc.

We, however, have never entertained any such expectation. The very nature of Mr. Darwin's theory foreshadowed its application to the human race: and with a perseverance that nothing but a desire for symmetry and universality in a theory can account for, he has embraced in his system not only man's physical constitution, but endeavored to trace all the phenomena of his mind and moral nature to the operation of the same mere physical causes that have developed his body to its present form and functions. He thus sweeps the whole range of psychological as well as physical science, and his system involves hardly less than a cosmogony. It really professes to be a complete Biology, if not as to the *why*, at least as to the *how*, of all organic existence. Thus it is, that this theory calls for the attention, if not the animadversion, of almost every other department of science; and Prof. Huxley must not complain, if even Mathematics and Astronomy seem to so far forget "their own business," as to think of applying some of their crucial tests to this Darwinian theory, especially when it expects to have its enormous drafts on the bank of *time* honored *ad libitum*.*

In the very first edition of his great work, "*The Origin of Species*," after stating his conclusion, that all

* See *North British Rev.* July, 1869. *Geological Time.*

the various forms of animal and vegetable life now living on the globe, or fossilized in its rocks, have come down by natural descent,—"animals from at most four or five progenitors, and plants from an equal or less number,"—he adds this suggestion:

"Analogy would lead me one step further, namely to the belief that *all* animals and plants have descended from some *one* prototype. But analogy may be a deceitful guide. Nevertheless, all living things have much in common in their chemical composition, their germinal vesicles, their cellular structure and their laws of growth and reproduction. * * * I should infer from analogy that probably all the organic beings which have ever lived on this earth have descended from some *one* primordial form into which life was first breathed by the Creator."

Such is the hint which he has carried out in his last work, "On the Descent of Man:" although in doing so, he has superadded *another* theory, that of "Sexual Selection," the discussion of which occupies the larger portion of the book, and has made sundry modifications and admissions in regard to his former theory of "Natural Selection," which by many are claimed to be *fatal* to his whole system. The introduction of man into the question has obviously very much complicated the whole subject; detracted altogether from the *simplicity* which formed such a powerful recommendation to the original theory, and has imposed upon Mr. Darwin a congeries of hypotheses, which it requires all his vast information and acknowledged acuteness to keep in a state of tolerable consistency with each other. The discovery that the original theory of "Natural Selection" is not *of itself adequate* in its application to man as an animal, seems to us a death blow to it as anything like a full account of the "Origin of Species."

However, reserving this part of the subject to another occasion, we propose in the remainder of this paper briefly to state Mr. Darwin's theory of the Ori-

gin of Species by Natural Selection, and to point out some of the chief objections that apply to it, many of which have been most scientifically formulated by Mr. Mivart, himself a professed evolutionist, and more especially to look at it with reference to its attitude toward teleology and creation. We are aware that a full discussion of these points would require a large volume, rather than a moderate review-article, but our purpose is merely to specify arguments with references to authorities in which some of them are more thoroughly elaborated.

Mr. Darwin's theory may thus be briefly stated:

1. All living beings have a tendency to multiply indefinitely in geometrical progression, thus producing an intense competition or "struggle for existence." Linnaeus says a single annual plant producing but two seeds, would increase to a million in twenty years. A pair of elephants, with but three pairs of young in sixty years, would increase to fifteen millions at the end of the fifth century, &c.

2. The animal and vegetable population of the earth remains nearly stationary, showing immense destruction or consumption of life.

3. Every living being tends to transmit its own nature and characters to its offspring, (the principle of *heredity:*) But,

4. Every individual may show slight *variations* in any direction, without limit, which variations, if *favorable* to the individual, tend to be perpetuated, and, accumulating in the same direction of advantage to the individual, become the derivative origin of incipient *species:* if not favorable, these variations tend to *destroy* the individual, &c.

5. This "transmutation of species" has been going on through "incomprehensibly vast periods of time" in the past,—practically infinite: and it has been a *gradual* and very slow process: Nature does nothing "*per saltum.*"

6. This tendency to the preservation of *favorable* variations, Mr. Darwin calls "*Natural Selection,*" for a reason which he thus states:

"I have called this principle by which each slight variation, if useful, is preserved, by the term of Natural Selection, in order to mark its relation to *man's* power of selection. We have seen that man by selection can certainly produce great results, and can adapt organic beings to his own uses, through the accumulation of slight but useful variations, given to him by the hand of Nature. But Natural Selection, as we shall hereafter see, is a power incessantly ready for action, and is as immeasurably superior to man's feeble efforts, as the Works of Nature are to those of Art." [Chap. III.]

It is common for writers of Prof. Huxley's school to object to the views of theists and teleologists, that they are mere "anthropomorphism." It seems, however, that an intelligent process of human ingenuity here suggested the proper name for what after all is claimed to be but an unmoral, unintelligent operation of nature. For we entirely agree with Prof. Huxley that Mr. Darwin must mean nothing more by his metaphorical language; even though the Frenchman, M. Flourens, accuses him of "personifying nature;"* and we agree with him, too, that Mr. Darwin's theory is directly opposed to teleology, instead of being compatible with it, as some maintain. For it is perfectly plain, that in Mr. Darwin's view, a "favorable variation" in any individual of a species forms no part of any pre-ordained *plan;* neither does it occur in *order* that such individuals may be preserved and a new species be inaugurated; neither

* "Lay Sermons," p. 314; see also p. 303.

does it arise for the ulterior benefit of any *other* being or person, or even of the individual itself that manifests it. The only statement of the case is, that amid the vast destruction going on in the "struggle for existence," some variations are preserved and continued because they *happen* to be best adapted to come off victorious in the general strife. The few individuals out of the great mass that have hitherto been born, which *happened* to have these advantages, bore up best against the perpetual strain of influences adverse to organized existence. This certainly is not "personifying organization," as M. Flourens has it; neither does it leave room for "design" or intelligence of any kind. It is simply of a piece with the notions of chance—"the infinite hits and misses in infinite time"—of the old Atheistic philosophy.* If "*Natural Election*" could be thrown back, like Calvinism, to a period "before the world began," in the mouth of the Theist it might amount to very much the same thing as saying, that on the whole, the Creator has peopled this earth with the class of inhabitants about the *best adapted to live on it;*

* Mr. Mivart himself in the close of his work, alludes to this character of the views he has been criticising. "Some of these," he says, "seem almost a return to the 'fortuitous concourse of atoms' of Democritus, and even the very theory of Natural Selection itself was in part thought out not hundreds but thousands of years ago. Opponents of Aristotle maintained that by the accidental occurrence of combinations, organisms have been preserved and perpetuated such as final causes, did they exist, *would* have brought about, disadvantageous combinations or variations being speedily exterminated." He quotes as an instance of this, the passage from Aristotle's Physics, thus translated:

"For when the very same combinations happened to be produced which the law of final causes would have called into being, those combinations which proved to be advantageous to the organism were preserved; while those which were not advantageous perished, and still perish like the minotaurs and sphinxes of Empedocles." [Arist. Phys. II., c. 8.]

though whether the inhabitants were made for the earth or the earth for the inhabitants, might as a question of science, still remain an uncertainty!

But, in short, as Huxley justly claims, Darwinism repudiates all notions of *construction* or design in the evolution of organic beings, and admits into the category of causes absolutely nothing but what has a physical basis. According to this notion, if there is order and harmony in the universe, it is because disorder can not exist—chaos can not "survive." Whatever is, is right, or in other words, it is because it could not have been otherwise, not because there is any purpose in it; even though Jonathan Edwards,—perhaps the deepest mind that America has as yet produced, fancied that there was something behind and above it all,—a *virtue* which he defines as "the *Love of Being in general*," which *organizes* system out of chaos, and life out of death.

It will be seen that the definitions or principles of Darwin's theory are so dovetailed together that no one of them can be struck out without destroying the whole. It is *necessary* that the distinction between species and varieties should be done away with, in other words, that species, which Linnaeus declared to be a classification by Nature itself, (*opus Naturæ*) and not, like orders and genera, a fiction of human wit, (*sapientiæ*) should be altogether *abolished*: it is necessary that the principle of variations should be practically *without limits*, in all directions, instead of being confined within a certain sphere around a definite type: it is necessary that the process of accumulating variations should have been slow and gradual, and that the whole space between remote extremes of specific development should be filled up with an unbroken succession of intermediate forms; that there should have been no catastrophes, no "special creation," no leap or *saltus* in natural operations: and

in order to all this, and to meet the objection of any example of these principles not being furnished by the records of the historic period, it is necessary to call in the aid of "incomprehensibly vast periods of past time," as many aeons or ages as the speculations of geological theories at least will allow. If these hypotheses are all established, then the origin of species by Natural Selection is proved: if any one of them fails, the whole theory has no standing point.

Professor Huxley says, that in geological inquiry, "Catastrophism" (Cuvier's theory of the effects of cataclysms and convulsions in former ages) "is the doctrine of the past: Uniformitarianism" (the theory of Hutton and Sir Charles Lyell, that all past operations and changes in Nature have been effected by causes of the same kind and degree that are still at work in Nature) "is the doctrine of the present: Evolutionism," (the theory of cosmic development out of molecular chaos, suggested by Kant and Laplace,) "is to be the doctrine of the *future*." Among the disciples of this new school are ranked Mr. Darwin, Herbert Spencer and Prof. Huxley himself. Evolutionism indeed is not necessarily blind chance, or atheism. "Molecular chaos," must have received or been "endowed with" its organizing force, that determined the end from the beginning, even if we acknowledge not the *continuous* operation of an original Will. Dr. Caird, in a sermon on occasion of the meeting of the British Association at Edinburgh, pointed out very acutely the confusions hanging round the scientific use of that word "law," as against personality and personal agency; when it only requires the attributes of *Infinite perfection* in the Agent, to get rid of the notion of caprice, and to invest his operations with the fixed and unchangeable characters which are expressed to us by the word "*Law*."

But we fear that the "evolutionism" of Huxley and Darwin, in its rejection of final causes as well as guiding intelligence, simply incorporates in itself that "uniformitarianism" of Hutton, which professes to find "no physical evidence of a beginning—no prospect of an end." Both in respect of time and steadily working causes, Mr. Darwin's system is essentially "uniformitarian." Whatever may have been the historical distribution of these three theories, we believe the future will vindicate whatever is sound in either of them, and will not permit any one of them to entirely supplant the rest or to monopolize the scientific world.*

As to the phrase "Natural Selection," when we come to analyze the facts, we find it is no *active* agent itself, notwithstanding what Mr. Darwin metaphorically says of its choice being so much superior to man's, and of its "checking deviations," "developing structure," "acting for the good of each creature," "trying to economize," &c. It is purely negative. It expresses the *result that is left* after certain destructive influences have been at work upon a variety of *accidental* combinations. As a late writer in the Quarterly puts it:

"Natural Selection is superior to human selection. What does this mean? That one is a better exercise of choice than the other? No: it means that whereas human selection is choice, trial and experiment, and may therefore fail, natural selection is secure because it is the favorable result to begin with. In human selection the choice aims at the event: in natural selection the *event makes the choice.* Natural selection endows the woodpecker with its instrument—'a striking instance of adaptation'—*i. e.*, it does not *give* one woodpecker its instrument; it has nothing to do with that; it only kills off another woodpecker who has not got it. * * * We have thus to commute the language of natural selection as fast as we receive it, to drive metaphorically forward and really backward at the same time, and at every moment to transpose by

* See *Ed. Rev.*, April, 1869, and January, 1870.

an understanding and arrangement with ourselves, the cart before the horse, into the natural order of the horse first."—*London Quarterly*, July, 1869. *Argument of Design.*

However, we suppose that in the sense in which Mr. Darwin uses the term, Natural Selection *does* give the one woodpecker its instrument quite as much as it "kills off" the other that is without it: only it is well enough to know what is really meant by this figurative language. Long before Mr. Darwin had put forth his theory, Prof. Owen, in his Comparative Anatomy, had spoken of the causes that operate to the *extinction* of species, the same that Mr. Darwin now applies to the *origin* of species: and Lamarck, one of the original "transmutationists" of modern times, expressed nearly the same thing under the phrase, "conditions of existence." Mr. Herbert Spencer has christened Mr. Darwin's theory with a phrase which has proved widely popular, and which Mr. Darwin adopts in his latest editions, "*survival of the fittest*," which of course means, "the best adapted *to* survive," though the same metaphorical indistinctness attaches to this expression as to most of the language connected with this subject. A writer in the London *Guardian* takes it as synonymous with the "prevalence of the strongest," as the prime constituent of the Darwinian system, taking precedence even of cunning or alimentary fitness; and this he infers from Mr. Darwin's illustrations, such as that of "two canine animals in time of dearth" struggling with each other for food, and the weaker leaving "few or no offspring." He therefore claims that on Mr. Darwin's theory "the present races ought, as a rule, to tower as much *above* the fossil ones in size and power as they now sink below them."

It is not likely, however, that this writer's definition would be fully accepted; or that we should be left to

conclude that nature reflects upon us a principle which, applied to human society, (for it is sought to embrace man in the hypothesis of natural selection,) would bring back the doctrine that "Might makes Right" with more than ante-diluvian force and violence, and wipe out every charitable and benevolent institution that has distinguished Christian civilization from pagan barbarism.

We have said that it is necessary to this theory that the word *species* should be abolished. We are asked to believe that "every species is only a link between *allied* forms," and that species are only varieties, and varieties are species. But *how* allied? Allied in the characters that have heretofore been understood to establish species? We cannot agree that Natural History has by any satisfactory proof arrived at this point yet, although Mr. Darwin says that "naturalists have no golden rule by which to distinguish species and varieties." (P. 281.) We believe that Prof. Owen's declaration is still substantially true, that "*observation* of the actual change of any one species into another, through all the hypothesised transmuting influences, has not yet been recorded;" and it is certainly requiring too much to claim that the deficiency of the historic record in this respect is to be supplied by a speculative filling up of what he admits to be the "imperfection of the Geological record."

Notwithstanding the almost universal triumph of Nominalism in modern philosophy, we rather agree with Agassiz and other eminent naturalists, that the word species does not represent a mere "category of thought," but the Realistic idea of a *common nature*; as we believe that *human nature* is a reality, independently of its embodiment in any particular individual.

But, however this be taken, Mr. Darwin's conception

of various species as only a certain *stage of descent* from some one common ancestor, instead of being a definition to start with, is the very gist of his theory to be proved. This question he has discussed in his late work on "The Variation of Animals and Plants under Domestication," intended as an accessory to his "Origin of Species;" but we cannot see that all the wealth of interesting facts which this work really contains, goes to show anything more than the variability of distinct species under the vigilant care of man, within certain limits, and around a definite type, with a constant and strong tendency to *revert* to that type so soon as the ingenious exercise of man's *artificial* selection is discontinued. And Mr. Darwin admits that animals show vastly greater *plasticity* under the hand of man than in a wild state. How then is it possible to argue for even *greater* results in nature, from what man accomplishes by a rational combination of circumstances which could never be fortuitous or take place of themselves?

Cuvier admitted the variability of species "up to a certain point;" Lamarck maintained the "transmutation" indefinitely by the operation of external causes and by some unknown law of progressive development; what is new in Mr. Darwin's theory is the mode of this development by natural selection; but so far as we can judge, Prof. Owen, Agassiz, and most of our best naturalists, in their observations of variability, have seen no reason to change their conclusion that these variations only run the round of a closed cycle. This ought to fix the definition of a species, as involving the blood relationship of all the individuals of such species, though it cannot be denied that the subject is involved in difficulties. Prof. Huxley gives two definitions, which we should rather take as parts of one; the first,

relating to form or structure, *i. e.*, the *morphological* aspect; the other relating to functional characters, or *physiological.* And it seems to us that in his reasoning upon the subject he lays too much stress upon morphology, to the neglect of physiological considerations. And though Mr. Darwin says, "all living beings have much in common in their chemical composition, their germinal vesicles, their cellular structure, and their laws of growth and reproduction," yet how does this militate against separate origin and specific difference? It only proves them all a part of the same cosmos, and is only what we should expect in the theory of the same creator and the same creation. Because spectrum-analysis shows many of the same elements in the sun and in Aldebaran, must it follow that the one was "evolved" out of the other? Community of elements is a very feeble index to community of descent. And it is a very manifest *petitio principii* to assume that hybridism must go for nothing in determining the question of species. In fact, on one occasion at least, Prof. Huxley is candid enough to acknowledge that "as the evidence stands, it is not absolutely proven that a group of animals, having all the characters exhibited by *species in Nature*, has ever been originated by selection, whether artificial or natural. Groups having the *morphological* character of species, distinct and permanent races in fact, have been so produced over and over again; but there is no positive evidence, at present, that any group of animals has, by variation and selective breeding, given rise to another group which was even in the least degree *infertile* with the first." (*Italics ours.*) He believes "that experiments, conducted by a skillful physiologist, would *very probably* obtain the desired production of mutually more or less infertile breeds from a common stock in a comparatively few

years; but still, as the case stands at present, this 'little rift within the lute' is not to be disguised or overlooked." ["*Lay-Sermons*," p. 295.] It is more than a "little rift;" it prevents Mr. Darwin's hypothesis from as yet assuming the dignity even of a theory. Within the "historic period" at least, hybridism exhibits a distinct barrier between species. Prof. Owen in his "Classification of Mammalia" refers to the history of the dog, from the earliest records of Egypt, a period of over 4,000 years, and the innumerable experiments to which that animal has been subjected, as to different degrees of exercise, difference in food, and association with man, no domestic animal showing so great a range of variety in size, color, character of hair, form of head, proportion of cranium and face, &c., and then adds:

"Yet, under the extremest mask of variety so superinduced, the naturalist detects in the dental formula and in the construction of the cranium, the unmistakable generic and specific characters of the *canis familiaris*. Note also how unerringly and plainly the extremest varieties of the dog-kind recognize their own specific relationship. How differently does the giant Newfoundland behave to the dwarf pug on a casual rencontre from the way in which either of them would treat a jackal, a wolf, or a fox. The dumb animal might teach the philosopher that unity of kind or of species is discoverable under the strangest mask of variation."

Notwithstanding Prof. Huxley's plain admission in regard to the non-production of varieties as yet mutually infertile, it appears that some ten years ago, in a "Lecture on Species and Races and their Origin," which does not appear in this volume of "Lay-Sermons" but was printed in the Journal of the Royal Institution,* he put two diagrams before his audience, one connecting the four varieties of pigeon, the Tumbler, the Runt, the Pouter and the Fantail, as descended from a common ancestor, the Rock pigeon, or *Columba Livia:*

* Cited in *Edinburgh Review*, 1860.

and the other connecting the four species, the Horse, the Tapir, the Rhinoceros and the Hyrax or Coney, as *probably* descended from the fossil *palaeo-therium*, though by a vastly longer process than it took to produce the varieties of pigeons. The authority we refer to points out, at a length we cannot follow, how the Professor exaggerated resemblances and glossed over discrepancies of structure; but was obliged to confess that his parallel broke down at the physiological test of hybridism. The writer adds that the real parallel would have been, "Racer, Dray-horse, Barb, Galloway, from the common stock *Equus Caballus*;" for these, like the varieties of the pigeons, are not only morphologically, but physiologically alike: with parallel differences in size, color, caudal vertebræ, tegumentary appendages, relative length of limb, &c. &c.

It is, in fact, the grossest assumption to argue from the results of artificial selection to establish natural selection. They may be shown to be the very antipodes of each other. Artificial selection implies an actual *prevention* of what would otherwise inevitably take place if the animals were left in a state of nature. A favorable variation must be *guarded* against the preponderating influence of the great mass to merge the peculiarity in the natural type. Besides, these variations of artificial selection are hardly ever favorable to the animals as such, do not improve the typical character of the animal as an animal: they are rather in the nature of forced diversions of a type to the artificial purposes of man, and not the benefit of the animal itself—that is, they are really *monstrosities* in the light of nature and compared with the real norm of the species, which nature when left to herself is ever seeking to restore. And in general, whatever advantage is developed in some one quality for the benefit of man is at

the expense of some other quality equally or more important to the animal itself, as regards its preservation in a state of nature. Professor Huxley, indeed, seems to regard monstrosities and sports of nature as in the ordinary line of regular development of new species; though he cannot but admit that his argument from the "Ancon" sheep and such things as the occasional appearance of six-fingered individuals among mankind, is in direct opposition to the principle upon which Mr. Darwin proceeds, that nature is uniform in progress and makes no leaps. [*Lay Sermons*, p. 295.] His reason why the Ancon variety did not become permanent is inadequate, while his remark, intended to explain why the six-fingered family reverted to the usual pentadactyle type, to wit: that "they were too far removed from the patriarchal times to intermarry with sisters," seems too much like scientific trifling.

There can be no doubt that this subject of variability presents many questions which must be left to further scientific research; the evidence so far by no means justifies the claim that Natural Selection meets the case; but, as Mr. Mivart clearly shows, there are modes and conditions of organic action of which the Darwinian theory takes no account whatever.

If Natural Selection began with primordial forms and developed them into new species constantly varying and advancing, how are we to suppose that *any* of the progeny of primordial forms should have escaped the effects of surrounding influences, which constitute that natural selection? Why do we not find *all* present organic forms very complex and superior to the primordial simplicity? Why are the protozoa still the most numerous of all? Why do we find every grade of structure, from the most simple to the most complex, now in existence? How can these facts be reconciled

with the hypothesis of *one* only primordial form, the parent of all subsequent living beings? And why do we find, too, a large tract of the globe, like New Zealand, that has its ascidians and lower forms of life, and yet exhibits nothing higher in the mammals than a simple rodent like the field rat? We are required to believe that a few individual peculiarities are selected and preserved through all adverse influences, against what we know of the law of fertility, and that accumulations of favorable variations are slowly concentred by direct lines through a thousand generations into one new species;—in other words, as a matter of fact, that each new species is the result of myriad *fortuitous* combinations through immeasurable periods of time.

A writer in the *North British Review* of June, 1867, presents some unanswerable considerations on this subject. He shows that even the skill of artificial selection is confronted with positive limits, soon reached in any direction. He thinks that for any one to say, that "if six or sixty years can make a pouter out of a common pigeon, six myriads may change a pigeon to something like a thrush, seems no more accurate than to say, because a cannon ball has traversed a mile in a minute, *therefore* in an hour it will be sixty miles off, and in the course of ages will reach the fixed stars." His idea of this variability is, that

"A given animal or plant appears to be contained, as it were, within a *sphere* of variation: one individual lies near one portion of the surface; another individual of the same species near another part of the surface; the average animal at the centre. Any individual may produce descendants varying in any direction, but is more likely to produce descendants varying toward the *centre* of the sphere, and the variations in *that* direction will be greater in amount than those toward the surface."

Facts fully bear this out. But Mr. Darwin says,—"The struggle between natural selection on the one

hand, and the tendency to reversion and variability on the other, will, in the course of time, *cease*, and that the most abnormally developed organs may be made constant, I *can see no reason* to doubt." He certainly gives no good reason to believe it. It is easier for man's selection to *diminish* peculiarities, that is, to fall in with the tendency to reversion, than it is to increase them; and what prevents it being equally so with nature?

Again, an individual may show an advantage, but that does not raise the whole species; it is necessary that a very large number of individuals should suddenly show the same advantageous peculiarity at the same time, to stand any chance of survival; and if at the same time, some other *hostile* species should be similarly favored, natural selection would be tending to a "war of Titans from a war of pigmies." But in the case of a few individuals only developing the peculiarity, the advantage would be utterly out-balanced by numerical inferiority. As the same writer says:

"A million creatures are born; ten thousand survive to produce offspring. *One* of the million has twice as good a chance as any other of surviving; but the chances are *fifty to one* against the gifted individual being one of the hundred survivors. No doubt the chances are twice as great against any one other individual, but this does not prevent their being enormously in favor of *some* average individual."

Of course the chances of the *progeny* of a "sport," being usually intermediate between the sport and the average, would be still less than those of their parent. This writer enters into an arithmetical calculation by which he shows how numbers may offset any advantage in structure, and concludes:

"As the numbers of the favored variety diminish, so must its relative advantage increase, if the chance of its existence is to surpass the chance of its extinction, until hardly any conceivable

advantage would enable the descendants of a single pair to exterminate the descendants of many thousands, if they and their descendants are supposed to breed freely with the inferior variety, and so gradually lose their ascendancy. If it is impossible that any sport or accidental variation in a single individual, however favorable to life, should be preserved and transmitted by natural selection, still less can slight and imperceptible variations, occurring in single individuals, be garnered up and transmitted to continually increasing numbers."

Mr. Darwin, in his last edition, refers to this argument in a way that indicates his consciousness of its great force. He says:

"Until reading an able and valuable article in the *North British Review*, (1867,) I did not appreciate how rarely single variations, whether slight or strongly marked, could be perpetuated. * * * The justice of these remarks cannot, I think, be disputed. If, for instance, a bird of some kind could procure its food more easily by having its beak curved, and if one were born with its beak strongly curved, and which consequently flourished, nevertheless there would be a very poor chance of this one individual perpetuating its kind to the exclusion of the common form; but there can hardly be a doubt, *judging by what we see taking place under domestication*, that this result would follow from the preservation during many generations of a *large number* of individuals with more or less curved beaks, and from the destruction of a still larger number with the straightest beaks." (p. 94.)

But the question is *how to get* this "large number" out of an individual variation; and if he then says the variation, instead of being eccentric, must be such as is manifested at once in a prevailing proportion of the species, this would be equivalent to abandoning more than half if not the whole field before covered by his theory. "In his work on the Descent of Man," he has made other and more serious admissions and modifications of his previous positions.

We find that we have left ourselves too little space to go into the question of Geological evidence, or to do

justice to the work of Mr. Mivart on the "Genesis of Species."

Mr. Darwin justly says that the geological record is imperfect; but certainly, it is not so imperfect that it ought not to furnish overwhelming proof of his hypothesis if it be true. There are certainly instances enough of successive fossiliferous formations regularly superimposed upon each other to exhibit some of those innumerable intermediate forms which he claims to have existed between known species. Where does Geology give evidence of transmutations during any one period, however long that period is supposed to have been? Prof. Owen, in his "Palaeontology," says, "Every known fossil belongs to some one or other of the existing classes, and the organic remains of the most ancient fossiliferous strata do not indicate or suggest that any earlier and different group of beings remains to be discovered, or has been irretrievably lost in the universal metamorphism of the oldest rocks." Prof. Agassiz has declared that "between two successive geological periods, changes have taken place among plants and animals. But none of these primordial forms of life which naturalists call species are known to have changed during any of these periods." (*Contrib. to Nat. History.*) The polypes that are said to have been 30,000 years in building up the reefs of Florida have not changed a particle; and one of the latest writers on this subject* says:

"In the remote carboniferous epoch the insects that haunted the fern groves and sigillaria swamps were still of forms that can in some cases be classed in existing families, such as cockroaches, crickets, white ants, and such extremely specialized forms of beetles as curculionidae and scarabaeidae! If the development theory be true, these facts compel us to the conclusion that the ages since

* *Quart. Rev.*, April, 1869.

the carboniferous formation, vast though they are, can only be a small fraction of the whole period during which these complicated forms have been slowly evolved from the simpler Annulosa."

Reptiles, it seems, have now got down to this same formation, and fishes to the Upper Silurian.

But if Geology can spare unlimited time, it does not follow that Astronomy can allow the claim. Mr. Darwin asks for 300,000,000 years since the latter part of the Secondary period. Sir Wm. Thomson, in reviewing some of these theories of Geological Time, has, to our mind, utterly demolished the doctrine of Uniformitarianism, and shown by the nicest mathematical calculations, from the underground temperature of the earth, from tidal retardation of the earth's rotation, and from the nature of the sun's action and the dissipation of heat, that the present system has had a definite period of operation and is hastening to a *catastrophe.** Notwithstanding what is said of recent discoveries of low forms of life *below* what have been regarded as Primary and Azoic rocks, yet we do not see how Mr. Darwin can possibly account for the absence of his intermediate links except on the theory of catastrophism; and if the igneous and metamorphic formations teach anything, they confirm the Astronomic demonstration that the world was once a molten mass; that the earth was once, what the eminent Helmholtz maintains the sun is now—a *hot body cooling.*†

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*Geological Dynamics, Reply to Huxley. Trans. Geolog. Soc., Glasgow, 1869. See *North Brit. Rev.*, July, 1869.

† What are the changes of so-called "geological climates" and the interposition of the *glacial* epochs of the Eocene, Miocene, and Pliocene formations, but evidences of Catastrophism? They were catastrophes to species at least, and to gradual evolution. Even uniformitarians say that the present climate of the globe, especially in the Northern hemisphere, is *abnormal*, and allow that there must

Of course, we cannot go into details here. The subject may be said to be *sub lite*; but from all appearance, this school of Evolutionists are likely to find the necessity of somewhat shortening their indefinite processes, and of admitting that some causes have wrought on a grander scale formerly than now, as well as the possibility of future events that shall terminate the present order of things.‡ It is of course not surprising, in view of such questions and difficulties—such gaps in the desired proofs—that we should find the language of doubt or of assumption scattered throughout Mr. Darwin's work in such expressions, frequently repeated, as, "I see no difficulty in supposing," "I can hardly doubt," "there seems no great difficulty in believing," &c., &c. To be sure, such language is hardly Baconian, but then we have been reminded in the outset that the subject presents "complex phenomena, the conditions of which are necessarily beyond our cognizance."‖

have been once a different distribution of land and water. Dr. Gunther has corrected Huxley's statement that the organisms on opposite sides of the Isthmus of Panama were entirely different, by showing that 57 at least out of the 173 known species are identical. So far as the inhabitants of the globe are concerned, it makes no difference *how* climatic changes are produced—it is catastrophism to them.

‡ See *North Brit. Rev.*, July, 1869.

‖ As an instance of rather hasty induction and an over-readiness to believe, we find that the following passage appears in his first edition:

"In North America the black bear was seen by Hearne swimming for hours with widely open mouth, thus catching, like a whale, insects in the water. Even in so extreme a case as this, if the supply of insects were constant, and if better adapted competitors did not already exist in the country, *I can see no difficulty* in a race of bears being rendered, by natural selection, more and more aquatic in their structure and habits, with larger and larger mouths, till a creature was produced as monstrous as a whale." (!)

Buffon would have probably called this a *descending* scale, not an *ascending*. In his last edition, only the *first* sentence of this extraordinary passage appears, to what purpose it is not easy to see.

That being the case, we should take leave to say that Mr. Darwin's work can hardly get beyond the conditions of an unverifiable hypothesis.

Mr. Mivart, in his able and satisfactory treatise, presents in detail objections, more incisive and scientific perhaps, than those we have thus far indicated, to the theory of Natural Selection as an exclusive and adequate theory. He finds it utterly defective in the question of incipient stages of variations, of closely similar structures of acknowledged *diverse* origin, of sudden leaps of nature, of the limits of variability, of the absence of transitional links, of physiological differences, and geographical distribution. We cannot reproduce them here, and we regret it the less as we would wish our readers to possess themselves of what we can recommend as the best resumé of modern views on the subject of the *Genesis of Species.* His own theory of Evolution is an attempt to harmonize the three conceptions of the organic world which are termed the Teleological, the Typical, and the Transmutationist. The facts which Darwinism has appropriated, it interprets in a different spirit, throws out the *fortuitous* element altogether, and substitutes the continuous operation of a Divine Will and Intelligence in a system of what might be called *derivative creation.* He finds also a surprising amount of testimony in favor of this view among early Christian philosophers. His chapter on Theology and Evolution is a very remarkable one, and deserves an article to itself. Much of it will come in play in our future consideration of Mr. Darwin's application of his theory to the question of the origin of man, which, as already intimated, must be postponed to a separate paper. Mr. Mivart would indeed, with a praiseworthy amiability, like to reconcile even the special Darwinian form of the theory of Evolution with Theistic views of

organic existence; but this we think is not practicable so long as an essential feature of that theory is the denial of final causes. But Mr. Mivart's answer to Herbert Spencer's dictum that "the ultimate Cause of things"—the "Inscrutable Power manifested to us through all phenomena" is "*unknowable*" or "transcends Intuition" is every way admirable, and a complete vindication of our intuitions. As Mr. James Martineau points out, to say that God is unknowable, is to say not only that we can know nothing of Him, but also that he cannot reveal Himself to us; or in other words, that "He is a Being that may exist out of knowledge, but is precluded from entering within the sphere of knowledge." As we said at the outset, such views of the relation between Nature and her first cause, are but a rehabilitation of the ancient Epicureanism which sought to banish Deity from the universe.

It remains but to add a few words upon the aspect of Mr. Darwin's system as regards "teleology," or the doctrine of final causes.

He does, indeed, in one place speak of the "laws impressed upon matter by the Creator," and of life as having been "originally breathed by the Creator into a few forms or into one." (p. 436.) Why then does he object to such expressions as the "plan of creation" and "unity of design?" Is it because, tracing back living forms to a period "long before the Silurian epoch," he thinks "we may look with some confidence to a future of inappreciable length?" And although on the same page, Mr. Darwin says, "as natural selection works solely by and for the good of each being [not of any *other* being] all corporeal and mental endowments will tend to progress toward perfection," yet Prof. Huxley, in order to *vindicate* Mr. Darwin from the charge of teleology brought against him by a German critic,

quotes the following passage, which we do not pretend to reconcile with the former:

"The foregoing remarks lead me to say a few words on the protest lately made by some naturalists against the utilitarian doctrine that every detail of structure has been produced for the good of its possessor. They believe that very many structures have been created for beauty in the eyes of man, or for mere variety. This doctrine, if true, would be absolutely fatal to my theory—yet I fully admit that many structures are of no direct use to their possessor."

Now, if this be so, then the doctrine of final causes, or of any purpose extending *beyond* the good of the "possessor," would be equally fatal to his theory. And hence, as before intimated, we agree with Prof. Huxley when he says:

"There is not a phrase in the 'Origin of Species' inconsistent with Prof. Kölliker's position, that varieties arise irrespectively of the notion of purpose, or utility, according to general laws of Nature, and may be either useful, or hurtful, or indifferent." [*Lay Sermons*, p. 305.]

We think, however, that in a matter of so great importance as this, Mr. Darwin should leave no ground for uncertainty. As we have seen, Sir William Thomson agrees with Prof. Huxley in interpreting Mr. Darwin's theory as altogether repudiating the "argument of design." And as we shall hereafter see, this impression is confirmed by the manner in which, in his latest work, he has treated the subject of psychology. What Mr. Mivart's position is, in his own modified theory of Evolution, may be seen from the following words:

"Surely the evidence from physical facts agrees well with the overruling, concurrent action of God in the order of nature; which is no miraculous action, but the operation of laws which owe their foundation, institution, and *maintenance*, to an omniscient creator of whose intelligence our own is a feeble adumbration, inasmuch as it is created in the 'image and likeness' of its Maker." (*Genesis of Species*, p. 294.)

No scientific Theist could ask more than this, unless, indeed, we might add those words of the immortal Newton, which seem especially inspired to guard against that barren and narrow unbelief which is too often associated with the phrase, "Immutability of Nature:"

"Deum esse ens summe perfectum concedunt omnes. Entis autem summe perfecti Idea est, ut sit substantia una, simplex, indivisibilis, viva et vivifica, ubique semper necessario existens, summe intelligens omnia, libere volens bona, voluntate efficiens possibilia, effectibus nobilioribus similitudinem propriam, quantum fieri potest, communicans, omnia in se continens, tanquam eorum principium et locus, omnia per praesentiam substantialem cernens et regens, et cum rebus omnibus, secundum leges accuratas, ut naturae totius fundamentum et causa constanter cooperans, *nisi ubi aliter agere bonum est.*" (*Brewster's Life of Newton.*)

The last clause of this truly scientific creed saves all the authenticated facts of human history, and all the great verities of the Christian Faith! And we can but wish that writers of the new school would refer more frequently to Sir Isaac Newton, that master builder of science under the Baconian philosophy, of whom we may still say that he is the real father of our latest great discoveries that have revealed to us even the elemental constitution of the heavenly bodies!

Apart from the question of Mr. Darwin's attitude toward Teleology, the argument of design itself, which has been stigmatized as "mere anthropomorphism," would be best considered with those questions of psychology which are raised by his work on the "Descent of Man." It may be well enough to ask—"*what is* anthropomorphism?"—so long as any interpretation of nature given by "science" must be the product of human reason. Has science found in material nature itself any higher or more perfect instrument of philosophic analysis than the animal which science itself

allows to be the highest of all organisms—the intellect of *man* as applied to the questions of the *nature and reason* of things? Perhaps, however, man has sunk into the category of mere *phenomena*—the "effect of a cause"—and is therefore incompetent to pronounce upon the endless chain of which he is but a helpless and irresponsible link! But these considerations must be postponed for the present.

We have not noticed the difficulties which the eminent naturalist, Mr. Wallace, who has supplied a very large proportion of the facts upon which the Darwinian hypothesis relies, has found in the way of "Natural Selection" as a complete or adequate theory of the origin of species;* because they are partly noticed by Mr. Mivart, and mostly relate to the application of the theory to the origin of Man.

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*Contributions to the Theory of Natural Selection by Alfred Russel Wallace. Macmillan & Co., London, 1870. One of these essays, "Limits of Natural Selection as applied to Man," is given in Littell's Living Age," No. 1410, (June 10, 1871,) a valuable serial published at Boston, which reprints much of the best foreign literature on scientific and other subjects.

DEMONOMANIA AND WITCHCRAFT.

BY JOSEPH WORKMAN, M. D.

[Read before the Association of Medical Superintendents of Insane Hospitals, at the Annual Meeting, in Toronto, June, 1871.]

I presume there is hardly a member of this Association who has had the good fortune to be unacquainted with that distressing form of insanity, which is known under the designation Demonomania; and I am sure none who have had to encounter it in some of its intense forms, will deny that it is one of the greatest difficulties presented to our specialty. I fear that in its treatment we seldom derive much valuable aid from the quarter to which we have some right to look for it; yet we should feel most thankful for even the most trifling assistance in our arduous work.

Belief in diabolic possession as an existing fact of the present day, may, I think, be said to be extinct, unless among the least educated portions of society. It is not to be expected, that a doctrine, which, less than two centuries ago, pervaded the whole of christendom, and was preached from every pulpit, and proclaimed from every bench of justice, could utterly die out among the uncultured masses in any very short lapse of time. I have myself met with persons, not insane, who have avowed their belief in its present existence. I well remember one instance in the institution under my charge, when I requested a clergyman to see, and, with a view to her mental relief, to converse with a poor woman who was suffering under that strange form of insanity known as *Lycanthropia*. She believed herself to be a wolf, or a dog, and she declared she was labor-

ing under hydrophobia. She used to spit, and grin, and snap her teeth, as if anxious to bite, and would tell us to stand off, or she would destroy us. My simple minded clerical friend went to her bedside, and spoke to her very soothingly. She responded to his address in a series of lupine, or canine demonstrations, which utterly horrified him. He fled from the room, and when he recovered his mental equilibrium, said to me, "O! Doctor! that woman is possessed!" I replied, she certainly was, but not of the devil; for I had opened too many bodies of deceased maniacs, to believe that there was any necessity for ascribing their delusional extravagances to any supernatural agency. The ascription of insanity, and other maladies which involve a pathological condition of the brain and nervous system, to demoniacal influences, was, with our ancestors, a very easy mode of solving the great question of causation, which even now so much perplexes the cultivators of psycho-pathology. Across the long and deeply indented peninsula which we are now endeavoring to explore and to fathom, inch by inch, they made a very convenient short cut, which certainly saved them a great deal of time and laborious investigation; but their conclusion did not tend to the alleviation of human misery.

Of all the departments of diabolic sovereignty, none was so prolific in the literature of divinity and jurisprudence of the 15th, 16th, and 17th centuries, as sorcery and witchcraft. Bodin, one of the most brilliant and profound jurisconsults and historians that France ever produced, left a work upon each subject, which the most able writers of later times, have characterized as masterpieces of erudition; for Bodin renounces all claims to originality. He gives us the "opinions of a multitude of the greatest writers of pagan antiquity,

and of the most illustrious of the fathers." In short he rests his whole argument on "*authority*;" the last resource, as all men in the present day know, of all writers who fail to convince their readers by force of reason, and an appeal to the ordeal of common sense. Shortly after the publication of Bodin's work on Sorcery, Wier, a physician of Clèves, in the middle of the 16th century, wrote a book, entitled, "*De Prestigiis Dæmonum.*" He, as a doctor, (of medicine be it noted,) declared his conviction that many of the so-called victims of diabolic possession were simply *lunatics*; a verdict which, I am sure every member of this association, living and moving as we do, among the same class of unfortunates in the present day, will most unreservedly indorse.

It was hardly to be expected that this writer would, at a bound, overleap the boundaries of popular error, and set at defiance that reverence for authority, which was then regarded as the cardinal virtue of all literature and all philosophy. He believed, (or affected to believe,) that the world was peopled by crowds of demons, who were constantly doing mischief; but he endeavored to reconcile their ubiquitous manifestations with the simple phenomena of corporeal disease; exactly that which we now do. He did not believe that the possessed ones had entered, as was then the universal belief, into any unholy compact with Satan, but that they were merely his passive subjects; nor that they were guilty of those evil deeds, of which many of them accused themselves; but rather that Satan had villainously persuaded them that they had actually, of their own free will and motion, so done.

If we should inquire what has been, among a moiety of the learned of the present day, the advance made by them on the theory of Wier, what might be the

response to our question? Wier did not, as James VI. of Scotland did, believe that witches raised terrific sea-storms, and wrecked noble argosies, nor ride through the air on broomsticks, to participate in the horrid orgies of their *Witch-Sabbath*, nor become, as James and other not less erudite authorities have told us, the concubines of Satan; yet he did believe that these poor demented beings were still the vassals of the Arch-Fiend.

Three editions of Wier's book were published in a short time, and it was translated into French in 1569. Its appearance in this language aroused the indignation of Bodin, who declared he could not find words meet to express his astonishment, that a puny doctor of physic should have dared to oppose himself to the authority of all ages; and to question the existence of the most notorious of all facts. He declared Wier's impiety to be even greater than his audacity, for he "had armed himself against God." He declared Wier's attempt to save from fire, those whom Scripture and the voice of the church had branded as the worst of criminals, the very climax of treason against the Almighty.

Bodin's second work was provoked by Wier's heresy, and it must certainly be one of the richest depositories of demoniacal erudition, and of Satanic inspiration, to be found in the whole domain of bibliography. Take as an example, the following deliverance, with respect to the best means of extorting from the accused, confessions of their guilt. "Sharp pincers should be inserted between the nails and flesh, such as are in use in Turkey." We shall see, by and by, that James VI., was not unskilled in this witch art. "Some magistrates are in the habit, Bodin tells us, "of employing counter-charms," which he declares to be a perilous course. He

would have torture in *ordinary* cases only after failure of other means. He would first try terror, by letting them see the implements of torture, and hearing frightful cries, as if from one under the infliction. He tells of one functionary who had a countenance so terrific as to frighten all courage out of the guilty. This sort of experiment, he *naively* lets us know, is more proper towards timid than towards impudent persons. Spies who should feign being themselves accused of similar crime, he says, were most valuable witnesses.

The law of evidence, as laid down by Bodin, is so grotesquely ludicrous, that it would be impossible to restrain our laughter, did we not know that this famous jurisconsult's deliverances, on this subject, became a text authority, even more abiding than the commentaries of Blackstone, Coke, or Littleton, and that thousands were under its dictation consigned to the flames.

First and strongest among the proofs of diabolic possession, he places the notarial document between Satan and his witch disciple, which, as it appears, needed not the sign manual of the former, but only that of the latter. The great German poet Göethe, in the preliminary arrangement between Faust and Mephistopheles, shows us that the signature of the endowed must be written with blood, for, says his high-commissioners hip,

"*Blut ist ein gauz besondres Saft.*"

Bodin does not seem to insist upon *red* ink. Indeed it is probable that in the days of Bodin not many of the witches were competent in the art of penmanship, and therefore their signatures, in full, could hardly be insisted upon. They could not, however, have signed by the mark of the cross, for so orthodox a catholic as Bodin was, would well know, that this form of subscription would have upset the whole arrangement.

He tells us that a second indisputable proof is, if the accused speak to the devil, and he, though invisible, answers. How many asylum physicians, were the jurisprudence of to-day the same as in the time of Bodin, would be found most valuable corroborative witnesses, in this direction! Could we not tell very marvellous tales of the interviews and colloquies which some of our patients assure us they have had with Satan, or his emissaries?

It is also, says Bodin, a valid proof, if the witch has been found absent from her bed, when all the doors were locked. In this case she must have gone out through the key-hole, which, unless she really was a witch, she certainly could not do.

Bodin describes fifteen detestable species of crime prepetrated by sorcerers, or witches, some of which must, in the age of credulity in which he wrote, have appeared atrocious beyond all measure of punitional retribution. One of these was doing homage and sacrifice to the devil; and of this an unobliteratable proof remained in the mark of the "*osculum in tergo*," which I may be excused from rendering into plain English. All readers of witch history are well aware of the abominable indecencies involved in this judicial tenet.

The last of Bodin's fifteen diabolic crimes, and the most tremendous of all, was that of sexual intercourse with demons, and the procreation of juniors, who, if we may believe all that has been recorded of them, were by no means unworthy of their illustrious sires: some indeed of the writers on the subject of demonology, seem to think the stock was enriched by this crossing-out process.

In support of this theory of multliplication of the race of demons, Bodin, who never wrote unauthorizedly, quotes freely from the early fathers, especially from Justin Martyr, Tertullian, Lactantius, and St. Augustine.

The publication of Bodin's treatise gave a new and tremendous stimulus to public zeal in the discovery and extirpation of witches, and as he strongly advocated the punishment by burning, the result was an incalculable amount of human agony from this terrible infliction.

The most illustrious demonologist in our mother country was the British Solomon, James VI., of Scotland, and I. of England. He published his brochure on witches at Edinburgh in 1597, and shortly after his accession to the throne of England, he deemed it expedient, by a second edition in London, to enlighten his new subjects on the recondite science of which he was so profound a master. In his introduction he tells his readers that "the fearful abounding at this time, in this country, of those detestable slaves of the devil, the witches, or enchanters, has moved him of conscience to resolve the doubting hearts of many, both that such assaults of Satan are most certainly practiced, and that the instruments deserve most severely to be punished." He was not slow in following up his philanthropic purpose, for in the very first year of his English reign, he secured from a parliament overpowered by the forcible logic of his treatise, the enactment of the celebrated Witch Act,—a law more bloody and more lasting than was the code of Draco, for it remained unrepealed until the middle of the last century. James had received from the witches of his native country much provocation. His conjugal alliance with the house of Denmark came very near frustration, in consequence of a terrific storm raised by the witches, during the voyage of James and his bride, to Scotland.

One Dr. Fian, was accused as the ringleader of a witch-circle comprising some 40 or 50, who were all duly disposed of, according to the jurisprudence of the time. He confessed, under the torture, as did many a wretched

witch, to his guilt, but he, immediately after, retracted his confession. "Every form of torture was then in vain employed to vanquish his obduracy. The bones of his legs were broken into small pieces in the iron boot. All the tortures that Scottish law knew of were successively, but wonderful to say, not successfully applied. At last the King, (that "*most dread sovereign*,") who presided in person over the tortures, arising like "*the sun in his strength*," suggested, (having no doubt read Bodin's treatise,) a new and more horrible device. The prisoner who had been removed during the deliberation, was brought in, and, in the words of the record of the trial, "his nails upon all his fingers were riven and pulled off with an instrument called in Scottish a turkas, which in England we call a pair of pincers, and under every nail there was thrust in two needles over, even up to the heads; but so deeply had the devil entered into his heart, that he utterly denied all that which he before avouched, and he was burnt unconfessed."

Scotland has done due honor to many of her gifted sons; but I am not aware that she has yet erected a monument in commemoration of this noblest of her martyrs.

It is hardly to be supposed that a monarch who was so highly eulogized by the most eminent and learned divines of his time, would fail to impress all classes with a strong conviction of the necessity of a vigilant enforcement of his Witch Act. It assuredly did not remain a dead letter on the statute book. Witch drowning, hanging, and burning soon became familiar facts in the land ruled by his "*Dread Majesty:*" and yet witches did not decrease in number. On the contrary they seemed to spring up, phœnix like, from the ashes of the destroyed ones. It is a fact well known to

British sportsmen, that hares are always most numerous in those parts where they are hunted. I remember once spending a considerable time, constantly out of doors, in a district where there was no hunting. I never saw a single hare there; but when my field duty brought me nearer to the hound kennels, then I would see one in almost every field. Indeed I knew of two sagacious old ones who resided in a meadow close to a kennel. It was said by skilled persons that these creatures, knowing that the hounds were never cast off so near home, had concluded that they would have quieter lodging here than further away from their persecutors. Whether a similar state of matters obtained in the days of witchdom, I am unable to state. It is however an unquestionable fact, that wherever and whenever witches were most actively hunted after, they were most abundant. In the short period of Cromwell's usurpation, (and in justice to the illustrious house of the Stewarts, the fact should not be withheld,) more witches were destroyed in England, than in all the rest of the period during which the witch mania prevailed.

It has been calculated that from 1603 to 1680, the total put to death by regular legal process alone, was about 70,000, and if in the ten years of exclusion of the Stewarts from the throne, over 35,000 witches were destroyed, the annual number must have been over 35,000, or nearly 10 per day, Sundays not excluded. In those days the office of witch-finder was one of no small distinction. In the county of Suffolk, one of this class of public functionaries, seems to have done keen service. His name was Matthew Hopkins. Butler in that imperishable depiction of Puritanical hypocrisy, ignorance, and superstition, his Hudibras, alludes to the efficiency with which this gifted personage performed his task. (*See Canto* III., *of part* 2, *line* 139 *et postea.*)

"Hath not this present parliament
A ledger to the devil sent
Fully empowered to treat about
Finding revolted witches out?
And has not he within a year
Hanged three score of them in one shire?
Some only for not being drowned,
And some for sitting above ground
Whole days and nights upon their breeches,
And feeling pain, were hanged for witches,
And some for putting knavish tricks
Upon green geese and turkey chicks."

But "transient is the smile of fate," for Butler a little farther on tells us, this adept witch-finder

"After proved himself to be a witch
And made a rod for his own breech."

Even the most zealous opponent of capital punishment might hesitate to say it was here inadmissible.

Among the sixty Suffolk victims of that fearful year, was an unfortunate episcopalian clergyman of eighty years old. The pious Baxter calls him an "*old reading parson*," and informs us that he confessed to being possessed of two imps, a good and a bad one; a circumstance in which I imagine he pretty much resembled ourselves. The one was always prompting him to evil deeds; but the other faithfully restrained him from them, until one unlucky day as he was walking on the sea-shore, he saw a ship at a distance. The evil imp urged him to sink the ship, and he did so, too promptly for the good imp to interpose. Have you, gentlemen, not met with men quite as potent in sinking ships as was this old doting "reading parson?" Verily you have, many such. I have under my care a man who built our asylum at Boston, and transported it to Toronto by means of a huge balloon, and this feat was but a trifle compared with hundreds of others done by

him. Poor old Parson Lewis saw the ship, and he believed he could sink her, though many miles from him. She at once disappeared, therefore he had sunk her. It is too probable that when some of us reach four score years, we may have similar visual experience, but it is to be hoped we may not be similarly deceived; and it surely is no trivial blessing that we live in an age when natural phenomena are more rationally interpreted than they were in that of Cromwell.

The poor "old reading parson," was, to the entire satisfaction of Baxter, subjected to the ordeal of water; in which he was more expert than he believed the ship had been, which he said he had sunk; but to escape drowning was but the most certain step to hanging, and he was hanged accordingly. It booted not that he had been for fifty years, an exemplary minister of religion. Poor man! he shared in the superstition of the times; he confessed to his own demoniac possession; and in those days this was enough. Who knows but that he may himself, ere while, have lent a hearty coöperation in the destruction of witches? It would be an almost wondrous fact that he had not. I have not given in full the details of this poor man's sufferings. It is almost impossible to restrain one's risible proclivities, in the perusal of the worse than lunatic records of the judicial proceedings of our sapient ancestors, in witch cases; yet the subject is certainly not one at all harmonizing with merriment. Would that we could erase from our history the entire record! but we cannot; perhaps it is best so, for who can say how nearly now we approach the domain of mental darkness, and puerile credulity? Until we shall have outlived the marvels of table-jumping, spiritualistic telegraphs between living experts and departed disciples, the inscrutable untyings of Davenport knots, and

the hundred and one other supernaturalities which follow one another in a succession which threatens to be as interminable as human gullibility, we shall do well not to laugh at the follies and faults of our forefathers. At the close of the 17th century the belief in witchcraft had, partially at least, died out. A few trials and executions took place in the first 20 years of the 18th century, but unless among the very ignorant and a small section of the clergy, the doctrine seemed to have become obsolete. Though Chief Justice, Sir Matthew Hale, sentenced witches to death without compunction, and took advantage of the occasions for delivering to his audiences very learned and lengthened expositions of the reality of witchcraft and diabolism generally; and though Blackstone was a believer, and has told us that Addison also was of the number; yet, the superstition had to die, and to leave the poor witches to live. A judge of assize at the trial of one Jane Wenham, about the time last mentioned, had the hardihood to charge the jury strongly in the poor woman's favor; but he was a little in advance of the men whom he addressed, for despite his charge they brought in a verdict of *guilty*. The judge, however, readily obtained from government a reversal of the sentence which he had been reluctantly obliged to pass. But, poor man! now came *his* terrible trial—one of the witnesses for the prosecution had been the parson of Jane Wenham's parish; and he swore "on his faith as a clergyman he believed the woman to be a witch." The judge laid the birch on his parsonship rather smartingly; and he *felt* it. His brethren took up the cudgels, and waged a tremendous pamphlet war. They finally drew up a declaration of their unabated faith in witchcraft, which they closed with the portentous words, "*liberavimus animas nostras.*" Thus did

they ease their consciences. Assuredly the doctrine did not die in silence. From 1691 to 1718, when its moribund condition had become manifest, immense efforts were made to resuscitate it. Twenty-five books of various bulk, were published in its support, in England alone. One of these was written by the celebrated Richard Baxter. He was prompted to this labor of love by reading Cotton Mather's narrative of the Massachussetts witch trials. Baxter was much edified by the details, and did his best to stir up the English public to an imitation of the efforts of Mather and his twin assassin Parris, whom many of you, gentlemen, will recognize as the grand centre of that sewing circle, by virtue of whose hysterical and maniacal evolutions and revolutions, the witches' hill at Salem was so fearfully enriched with victims. I may be allowed to pass over in silence this afterpiece to the great European tragedy. You are, no doubt, better read in its history than I am; and yet I can not help saying, I wish I knew less of it; for it exposes to view the weaknesses, and wickedness of a few men belonging to a valuable class whom no good Christian desires to lower in popular esteem; yet it is my honest conviction that parson Parris, of Salem, was one of the greatest scoundrels that ever gave notoriety to the witch mania. But the very enormity of this man's exploits, in all probability, brought the witchcraft mania to a much earlier close on this continent than otherwise it might have had. His victims were, as an able writer in the *Edinburgh Review* for July, 1868, has truly said, "the wisest, gentlest, and purest Christians his parish contained." Had they not been such, who can say how long the murderous superstition would have survived; for the colony of Massachusetts was founded in the time of James I., who had given his royal patronage and exalted scriptorial support, in prop-

agation of this article of Satanic faith. The Puritan fathers who fled from the Devil, in the shape of bishops, in England, still found his ubiquitous Highness in even more multiform manifestation in the New World. Every red Indian, who lurked and skulked around their clearings through the day, and at night ruthlessly fired their dwellings, and spared neither age nor sex, was surely to them no other than a missionary from hell; and when they found suitable opportunity they dealt with him as such. It was short logic, to ascribe all their terrible trials and sufferings to Satan. Had they continued to recognize his agency only in this relation, they would have escaped the honors of Salem witch-hill; but in those days no department of human affairs was considered exempt from Satanic domination.

Mr. Parris unfortunately got into a little altercation with some of his flock, on the delicate questions of salary, firewood, and the homestead title. All who opposed him, or spoke of him irreverently, he speedily catalogued, and by the aid of his little girl circle, and his two servants, John, and Tituba his wife, he managed to rid his congregation of not a few of these children of iniquity.

It must have been a scene infinitely richer than any of our modern spiritualistic circles can extemporize, when Mr. Parris assembled all the divines he could collect at his parsonage, and made his troop of girls go through their performances; for when they had ended their farce, a general groan issued from the reverend spectators, "over the manifest presence of the Evil One, and a passionate intercession for the afflicted children" was made. These children were suffering under the evil practices of the witches; that is to say, of those naughty people who grudged Mr. Parris a good salary, abundance of firewood, and his personal ownership of the parsonage.

It was a fearful thing in those times to be called a bad name by a parson. It is very unpleasant even in the present day, to be met with harsh epithets, where we might hope for calm discussion. We must not, however, be over angry with those who have recourse to such weapons; for they would not wield them had they any better at command; and the rational world now regards all recourse to this sort of battle, as but tantamount to an acknowledgment of utter defeat.

The repeal of the witch laws in England, in 1738, was an anomalous constitutional fact, which in the present day could not occur there, nor in this country; for it was a measure in utter antagonism with popular sentiment. The mass of the people, and the almost entire body of the clergy of all denominations, were opposed to it; and, for long years after, strenuous efforts for the restoration of the former *régime* were put forth. In 1768 John Wesley lamented the shocking decadence that had befallen "the belief in witches and apparitions." I shall not venture to quote his words, lest they might sound offensively; suffice it to say they were more earnest than discreet. Five years after Wesley's protest, "the divines of the associated Presbytery of Scotland passed resolutions, declaring their belief in witchcraft, and deploring the skepticism that was then general." (Macaulay; Hist. VIII., p. 706.)

We surely should not be surprised to find that, even now, only a century from the above declarations of men who have left on the world abiding and deep marks of their genius and influence, the belief in witchcraft and diabolic possession still lingers among the uncultured portions of society. In September, 1863, a man was beaten to death, by a mob of 70 mechanics and small tradesmen, in the county of Essex, England, because they believed he was a witch. Some six months ago, at New-

market, England, a man who had agreed to expel a witch, or some such unearthly thing, from a haunted house, was obliged to take legal process to recover the amount of the contract—some £18 or £20. The Bench directed that he should be paid ordinary laboring-man's wages. How shameful! The defendant did not deny that the witch, or ghost, had been expelled. He must, therefore, have been benefited to the extent of the rent; so that if value was not given, it certainly was received. Perhaps the Judge had some suspicion that the ghost was of the Bryan O'Linn stamp.

"Bryan O'Linn had no watch to put on,
So he scooped out a turnip, to make him a one;
He slipped in a cricket, clane under the skin,
"They'll think it is tickin'," says Bryan O'Linn."

The world abounds in Bryan O'Linn crickets, and if the Newmarket ghost was not one, I am sure it very easily might have been. What, however, has become of the great family of the witches? One would reasonably suppose that after they ceased to be exterminated, they must have multiplied with fearful rapidity. It is not on record that, like the Kilkenny cats, they ate each other up; yet they died off as soon as they ceased to be killed. Seventy thousand, we are informed by history, were destroyed in England in a little over seventy years. At the present day there are in England, Ireland and Scotland about this number of insane persons lodged in asylums. Is there one of you, gentlemen, who live among this afflicted class in this country, who doubts that in the time of witch hunting and burning and hanging, at least one-half of the 70,000 lunatics whose support costs so much to the already over-taxed people of the United Kingdom, would have been far more cheaply disposed of? *We* protect, and house, and feed, and clothe, and soothe the poor witches,—yea, and by

these simple means, do we not expel the Devil out of a great many? We do! and is it not marvellous that kindness is so potent, even over this wretch? Unkindness had utterly failed to exorcise him; but since, the true Gospel of Him who restored to a distracted father, an epileptic lunatic son, sane in mind and sound in body, has been, not merely preached in frothy words, but acted out in heavenly deeds, what a change has come over the dream of witchdom! Thousands and thousands of unreal, innocent sorcerers and enchanters were burned and hanged, in former times; but the greatest of all the modern tribe escaped—and that man was *Pinel*. *He* drove out Satan, by unchaining him. The brute could not look Pinel in the face, for heavenly charity beamed from *his* bewitching eyes. Wonderful yet to say, Pinel's head was saved from the block, by one of the possessed whom he had loosed from the bonds of Satan!

I am sure, gentlemen, you every one know how irresistible is the charm by which Pinel subdued Satan; for I know it is the one almost sole, curative agency by which our statistics are enriched—and certainly the statistics of American institutions for the treatment of insanity, need not blush under comparison with those of any other country.

Should it be alleged by critics of the outside world, less familiar than we are with the delusions of insanity, and with the terrible mental sufferings attendant upon some of them, that a brief exposition, such as this paper, of an antiquated and exploded fallacy, is at this day, before an association of alienistic physicians, uninstructive and uncalled for, I would simply observe, that very few of the delusions of the insane spring up indigenously. If we carefully and closely investigate the early training, and the past domestic and social forma-

tive influences, which have moulded the moral and intellectual characters of our patients, and have implanted in their minds those persistent habits of thought which become the semi-instinctive leaders and directors of maturer life, I think we shall not rashly conclude that their ravings are all of spontaneous generation. Certainly there is not one of us who would not be gratified with the knowledge that the seed of these tares had never been sown. To root them out, and avoid injuring the wheat, is our task, and it is truly an arduous and a delicate one. I can think of no more distressing position for a physician to be placed in, than that of the responsible charge of an afflicted fellow-being, laboring under the delusion of having committed the unpardonable sin, because of his having become possessed by Satan. You all know how commonly this mental condition is associated with persistent suicidal propensity.

I could, as you are well aware, exhibit a multitude of details confirmative of this fact; but such expositions of the frailties and sufferings of our patients, though attractive to the sensational and empty-headed classes, are by no means pleasant exercises to the writers; and assuredly they must prove very painful to those amongst our hearers, or readers, who have stood in close relation with the unhappy ones alluded to.

That there may be, or are, fulminating pulpit orators, who will not be admonished by anything short of the *experimentum crucis*,—who will not believe, before they have, as Thomas, thrust their fingers into the pierced side, and into the nail prints of their victims, I question not; for they are not unknown to me.

Is there not, gentlemen, a great lesson to the sane world, to be learned among the insane? If men require to learn the omnipotence of kindness, do you know of

a better school than the modern lunatic asylum? If they require to be taught that unkindness, and cruelty, and terror, effect no real change of conduct and character,—but on the contrary always render the subjects of them more obdurate and vicious than before, then let them take up their abodes for a sufficient time, among the inmates of *our* institutions. There they would be the right men in right places, and both themselves and the community at large would be immense gainers by the probation.

I have abstained from details of the atrocities resulting from the witchcraft superstition in the continental nations of Europe; not because they were less horrid than those perpetrated in our mother country, or because protestantism was more guilty, in this relation, than the olden church; but simply because the limits of a paper, for such an occasion as the present, preclude a wider excursion; and to tell the *whole* truth, I do not think that the confession of our neighbor's sins, instead of our own, is either a commendable, or a useful virtue, though we all know it is a very prevalent one.

Whether any good may result from the remarks which the experience of the members of this association may enable them to offer on the general subject of Demonomania, I dare not anticipate; but I can see no possibility of injury to the *victims* of this terrible form of mental alienation likely to proceed from them; and whithersoever duty calls us, thither unfalteringly *we* are bound fearlessly to advance.

LABIO-GLOSSO-LARYNGEAL PARALYSIS.*

E. R. HUN, M. D.

Wm. W——, aged 58 years, began to complain in May, 1869, that the saliva dribbled from his mouth when speaking or reading. One month afterward he said he was conscious of a difficulty in the pronunciation of words, although at this time it was so slight as not to be perceptible to those with whom he conversed. The following autumn there was a very evident hesitation in his speech; he talked slowly and deliberately, but correctly, excepting a defect in the articulation of certain words, and his voice had assumed a nasal tone.

In February, 1870, he visited some friends in the northern part of New York, and was able to travel alone. While in the country he placed himself under the charge of a physician, and electricity was employed but without benefit, as in his letters to his family he stated that he was growing worse.

He returned to Albany, in June, 1870, in the following condition: complete loss of speech; difficulty in deglutition, any effort to swallow being attended with paroxysms of coughing and suffocation; paralysis of the tongue, which could only be protruded a quarter of an inch beyond the edge of the teeth; body well nourished and appetite good; partial loss of motion in both arms, especially on the left side; pain in the thumbs, arms, and back of the neck; mental action unimpaired, except that the emotions were easily excited so that he laughed and wept without sufficient cause; could write perfectly with his elbow resting upon the table, but was unable to raise his arm so as to feed himself; could walk without difficulty.

* Read before the New York State Medical Society, Feb., 1871.

In July it was noticed that he dragged his feet a little, but he could still walk alone for a considerable distance. After this time, the movements of the arms and legs gradually became weaker, until in November he was unable to get up and down stairs, while at the same time the difficulty in deglutition increased. His writing became more and more illegible, and in the latter part of November he had to give it up altogether, and communicated his wishes to others by pointing out letters with a stick placed in his hand for the purpose.

In December he had a severe chill, which was followed by acute pain and complete loss of motion in the left arm, which became œdematous, and remained so until a few days before his death. He could walk only a few steps, and had great difficulty in doing even this.

During December the flexor muscles of his hands and arms began to contract, and in the latter part of the month his feet became œdematous. Sight, hearing, and appetite remained good throughout.

I saw the patient through the politeness of Dr. Fowler, his attending physician, from whom I obtained the above notes, on the morning of January 4th, 1871.

He was then sitting in a chair propped up by pillows, being unable to lie down on account of dyspnoea; complete loss of motion, except a slight nodding of the head and a little movement of the right hand; sight and hearing appeared unimpaired; speech entirely lost; mouth partly open and lips immoveable, except a slight twitching of the left angle of the mouth; cheeks flaccid; tongue completely paralyzed and lying on the floor of the mouth; respiration feeble and occasional coughing; pulse 90 per minute and regular; both arms paralyzed and slightly flexed and attempts to straighten the fingers caused pain; lower extremities completely paralyzed, and feet and ankles œdematous; defecation

natural; micturition slow and frequent; attempts to swallow occasioned distressing cough and suffocation, and the aliments were often rejected through the nose.

He remained in this condition until the afternoon of the same day, when an attempt to swallow some porridge brought on severe coughing and strangling. At seven o'clock that evening he died without a struggle.

Autopsy twenty hours after death.

External appearances. Rigor mortis well marked. Body spare, but not emaciated. No very evident signs of muscular atrophy.

Head. Scalp very dry. Scull cap removed with great difficulty, owing to adhesions of the dura-mater, which was torn in trying to separate it from the bone. Dura-mater very much thickened. Arachnoid normal, with considerable serous infiltration of the sub-arachnoidean connective tissue. Pia-mater much injected. The cerebral substance both cortical and medullary appeared to be of normal color and consistency, but exceedingly hyperæmic. The following condition of the cranial nerves was found. 1st. Olfactory, normal. 2d. Optic, normal. 3d. Motor oculi, normal. 4th. Patheticus, small. 5th. Trigeminus, on the left side flattened, gray and softened; on the right side, larger and very hyperæmic. 6th. Abducens atrophied, especially on the left side. 7th. Facial atrophied, and gray on both sides. 8th. Auditory, normal. 9th. Glosso-pharyngeal, normal. 10th. Pneumogastric, atrophied on both sides. 11th. Spinal accessory much atrophied. 12th. Hypoglossal so much atrophied on both sides as to resemble mere threads or filaments of connective tissue. The corpora striata and optic thalami were normal. The cerebellum was very hyperæmic, but otherwise presented nothing unusual. The pons Varolii and medulla oblongata appeared to be of firmer consistency than usual.

Spinal cord. Spinal meninges much injected. The anterior spinal roots were atrophied especially on the left side. Transverse sections of the cord showed the anterior cornua of gray matter, as well as the left anterior and right lateral columns, to be of a dark rose color as if very hyperæmic.

Thorax and abdomen were not examined on account of objections on the part of relatives of the deceased.

Portions of the brain, cerebellum, and spinal cord were immersed in absolute alcohol, preparatory to making sections for microscopic examination. When sufficiently hardened thin sections were made, stained with carmine, rendered transparent with benzole, and mounted in balsam.

The sections of the brain revealed nothing abnormal. The sections of the cerebellum a very hyperæmic condition of the part and a granular degeneration of the large ganglionic cells forming the middle layer of the cortical portion.

Thirty sections were made at various levels of the medulla oblongata involving the roots and nuclei of implantation of the cranial nerves, especially those of the facial and hypoglossal. Careful microscopic examination of these specimens with objectives varying from 15 to 900 diameters, demonstrated that the portion of medulla forming the floor of the fourth ventricle was the seat of several pathological lesions.

There was a decided hypertrophy or overgrowth of the connective tissue, which appeared to have encroached upon and to some extent replaced the several groups of ganglionic cells which form the nuclei of implantation for the facial and hypoglossal nerves. The individual cells comprising these groups were separated from one another and in many instances had lost their stellate appearance, their radiating processes

having been destroyed so that each cell remained isolated and disconnected from its neighbors. These cells had also undergone a degenerative process which in many cases rendered them simply a collection of fine granules, and a deposit of brownish yellow pigment had taken place to such an extent as to give the cells an appearance almost precisely similar to those which are normally found in the locus niger of Soemmering; they were fewer in number than usual and diminutive in size.

Sections of the cord made in the cervical, dorsal, and lumbar regions showed a sclerosis with increase of connective tissue in the anterior and lateral columns, which was most marked in the left anterior and right lateral columns. The multipolar ganglionic cells situated in the anterior cornua of gray matter were fewer in number than usual, and many of them appeared granular and very much pigmented.

The form of disease of which the above is a typical example, has been described by Trousseau and Duchenne, and a number of cases have been reported in various medical journals. It commences with a paralysis of the lips and tongue which is followed by a paralysis of the soft palate and pharynx; in many cases the disease does not stop here, but gradually attacks the muscles of the trunk and extremities. There is no muscular atrophy, but simply a loss of motor power. In those cases where an autopsy has been made, the roots of the hypoglossal and some of the other cranial nerves have been found to be atrophied, but little or nothing has been said of the condition of the central origin of these nerves, except in one case described by Dr. Samuel Wilkes, in the last volume of Guy's *Hospital Reports.* Dr. Wilkes says that "there was very obvious gray red change of the calamus scriptorius

from the nib upward and outward for half an inch." This change would necessarily implicate the cells of implantation of the facial and hypoglossal and probably of the spinal accessory roots, and we therefore have a central lesion accounting for the peripheral paralysis. Dr. Wilkes also states that the anterior half of the white matter of the cord was hardened and atrophied. In the case above reported not only the anterior, but also the lateral columns of the cord were affected so that we have a descending degeneration of the motor tracts of the cord, consecutive to a primary lesion situated in the medulla. This is fully in accordance with the views presented by Bouchard in his work on secondary degenerations of the spinal cord, and accounts for the progressive paralysis of the trunk and extremities which follows the original loss of motion in the lips, tongue, and palate.

An interesting fact in connection with this secondary disease of the cord, is the ultimate permanent contraction of the flexor muscles. This contraction with rigidity was present in the case reported, and is also mentioned by Trousseau as having occurred in one of his cases. Bouchard speaks of it as an almost constant symptom of secondary sclerosis of the anterior columns of the cord.

This case affords an illustration of the aid which the study of physiological anatomy may derive from pathology. We have here a very complete destruction of the cells of implantation of the facial nerves, and yet only a part of the muscles supplied by the facial are paralyzed. The orbicular muscles of the eye sare unaffected, and the patient can wink voluntarily while the buccinators and orbicularis oris are perfectly paralyzed. This can only be explained by the fact that some of the fibres of the facial nerve (as has been stated by

Stilling and Van Der Kolk) do not pass into their proper nucleus, but either pursue an upward course along the raphe of the cord, or else run into small ganglionic groups at a considerable distance from the nucleus proper. Thus from the fact of the non-paralyzed condition of the orbicularis oculi, notwithstanding the destruction of the nucleus of the facial nerve, there can be but little doubt that the fibres referred to by Stilling and Van Der Kolk are those which supply this muscle, and it is probable that these fibres terminate in ganglionic cells in the neighborhood of those from which the fifth pair of nerves originate, and thus we have an anatomical arrangement which may aid in the explanation of the reflex phenomenon of winking.

The prognosis in this disease is decidedly unfavorable. Among the many cases reported, not one case of perfect recovery is mentioned, and it is probable that the improvement which seems to have taken place in some of them was only temporary. The manner of commencement may be very sudden or slow and insidious, but there is but little variation in the ultimate termination. Death takes place either as a result of suffocation from the impaction of a bolus of food in the glottis, or else the slow accumulation of mucus in the lungs, which the patient can no longer cough up, gradually results in asphyxia. As for treatment there is little to be said. Life may be prolonged by the application of galvanism to the upper part of the cord and along the tracts of the affected nerves, but nothing as yet known has any power to retard the progress of the disease in the nerve centres. The following is a list of authors with references to where the cases are reported:

Trousseau—*Clin. Med.*, t. II., p. 334.

Duchenne—*Electrisation localisée Doc.*, p. 640; *Gaz. Hebd.*, VIII., 12, 1861.

Dumenil—*Gaz. Hebd. de Med. et de Chir.*, June, 1859, p. 390.

Samuelson—*Berl. Kl. Wochensch.*, No. 27, 1868; *Half-yearly Compend. of Med.*, January, 1869.

Ramskill—*Lancet*, June, 1869.

Herard—*Gaz. des Hopitaux*, No. 20, 1868; *Rankin's Abstract*, January, 1868.

Müller—*Hospit. Tidend*, Nos. 22 and 23, 1861; *Schmidt's Jahrb.*, vol. 113, p. 169; *Year Book of Medicine*, 1862.

Tommasi—*L'Union*, 114, 1862.

Wilks—*Guy's Hospital Reports*, vol. XV.; *Rankin's Abstract*, July, 1870; *British Medical Journal*, March 19, 1870.

PROCEEDINGS OF THE ASSOCIATION OF MEDICAL SUPERINTENDENTS.

The Association of Medical Superintendents of American Institutions for the Insane, held its Twenty-Fifth Annual Meeting, in Toronto, Canada, commencing on June 6th, 1871.

The Association was called to order at 10 A. M., by the President, Dr. John S. Butler.

The following gentlemen were present:

Dr. J. P. Bancroft, Asylum for the Insane, Concord, N. H.

Dr. D. T. Brown, Bloomingdale Asylum, New York City.

Dr. John S. Butler, Retreat for the Insane, Hartford, Conn.

Dr. T. B. Camden, Supt. elect., West Virginia Hospital for the Insane, Weston.

Dr. John Clopton, Assistant Physician, Eastern Lunatic Asylum, Williamsburgh, Va.

Dr. Wm. M. Compton, State Lunatic Asylum, Jackson, Miss.

Dr. D. B. Conrad, Central Lunatic Asylum, near Richmond, Va.

Dr. George Cook, Brigham Hall, Canandaigua, N. Y.

Dr. John Curwen, Pennsylvania State Lunatic Hospital, Harrisburg, Penn.

Dr. James R. DeWolf, Provincial Hospital for the Insane, Halifax, Nova Scotia.

Dr. John R. Dickson, Kingston Asylum, Ontario, Canada.

Dr. J. F. Ensor, Lunatic Asylum, Columbia, S. C.

Dr. Orpheus Everts, Indiana Hospital for the Insane, Indianapolis.

Dr. John P. Gray, State Lunatic Asylum, Utica, N. Y.

Dr. Eugene Grissom, Insane Asylum of North Carolina, Raleigh.

Dr. Richard Gundry, Southern Ohio Lunatic Asylum, Dayton, Ohio.

Dr. C. H. Hughes, State Lunatic Asylum, Fulton, Missouri.

Dr. Edward Jarvis, Dorchester, Mass.

Dr. Thomas S. Kirkbride, Pennsylvania Hospital for the Insane, Philadelphia, Penn.

Dr. Henry Landor, London Asylum, Ontario, Canada.

Dr. J. M. Lewis, Northern Ohio Lunatic Asylum, Newburgh, Ohio.

Dr. Jos. D. Lomax, Marshall Infirmary, Troy, N. Y.

Dr. A. S. McDill, State Hospital for the Insane, Madison, Wisconsin.

Dr. A. E. Macdonald, Assistant Physician, Lunatic Asylum, Ward's Island, New York.

Dr. Charles H. Nichols, Government Hospital for the Insane, Washington, D. C.

Dr. R. L. Parsons, New York City Lunatic Asylum.

Dr. Mark Ranney, Iowa Hospital for the Insane, Mt. Pleasant, Iowa.

Dr. Isaac Ray, Philadelphia, Penn.

Dr. J. A. Reed, Western Pennsylvania Hospital for the Insane, Dixmont, Penn.

Dr. Henry Riedel, Ward's Island, Emigrant Hospital for the Insane.

Dr. F. P. Roy, Quebec Lunatic Asylum.

Dr. John W. Sawyer, Butler Hospital for the Insane, Providence, R. I.

Dr. A. M. Shew, General Hospital for the Insane, Middletown, Conn.

Dr. John Waddell, Provincial Lunatic Asylum, St. Johns, N. B.

Dr. Clement A. Walker, Boston Lunatic Hospital, Boston, Mass.

Dr. John W. Whitney, Eastern Lunatic Asylum, Lexington, Kentucky.

Dr. Joseph Workman Provincial Lunatic Asylum, Toronto, Canada.

Also the following gentlemen by invitation:

Dr. Geo. Brown, Private Institution for Feeble-Minded Youth, Barre, Mass.

Samuel D. Hastings, Esq., Secretary, State Board of Charities and Reform, Wisconsin.

Dr. Edward R. Hun, Special Pathologist to the New York State Asylum, Utica, N. Y.

J. W. Langmuir, Esq., Inspector of Asylums, &c., Province of Ontario.

H. M. Skillman, M. D., Commissioner of the Eastern Lunatic Asylum, Lexington, Ky.

Dr. H. B. Wilbur, New York Asylum for Idiots, Syracuse, New York.

The minutes of the last meeting were read and approved.

On motion of Dr. Kirkbride, it was resolved that the President appoint the standing committees; which were subsequently announced as follows:

Committee on Business: Drs. Workman, Landor and Curwen.

Committee on time and place of next meeting: Drs. Gundry, Grissom and Bancroft.

Committee on Resolutions, &c.: Drs. Brown, Reed and McDill.

Committee to audit the Treasurer's accounts: Drs. Parsons, Hughes and DeWolf.

The President introduced to the Association, Dr. Brouse, President of the Medical Council of Ontario.

Dr. Brouse. I wish to say to you and gentlemen present, that the Medical Council of Ontario, will be in session in this city to-day, and for the next three or four days. We legislate on all matters in the Province of Ontario, respecting the curriculum of students and professional engagements. We would be happy to see any gentleman present who has liberty to call upon us at our rooms in the Council Chamber. We may not present matters of great interest to you, but at all events we will give you a cordial welcome.

The President. The Association thanks you, sir, for this invitation. It will give us great pleasure to see any of the members of the Council present during our sessions.

Dr. BROUSE. I thank you, and shall notify the Council of your invitation. We have many who are anxious to meet gentlemen of this Association, and I am happy to know they will have that opportunity.

The Committee on Business made the following report:

The Committee on Business recommend that the Association devote this day, Tuesday, to the reading and discussion of such papers, as may be presented by members, including the resolutions of Dr. Kirkbride, offered at the last meeting. On Wednesday morning, the discussion of papers, and in the afternoon, commencing at 2 P. M., visit Osgood's Hall, the University and the Normal School, and a session in the evening. On Thursday morning, discussion of papers and in the afternoon visit the Asylum for the Insane, Toronto, at 3 P. M. On Friday leave the Union Station, Toronto, at 7 A. M., for London, to visit the asylum at that place and spend the afternoon and evening there, and also for those who desire to visit the Helmuth College on Saturday.

On motion of Dr. Gundry, it was

Resolved, That Hon. J. W. Langmuir, Inspector of Hospitals of the Province of Ontario, be invited to take part in the deliberations of the Association.

The Secretary read letters from Drs. Gause, of Kansas; Stewart, of Maryland; Van Deusen, of Michigan; Bartlett, of Minnesota; Schultz, of Pennsylvania; Callender, of Tennessee; Godding, of Massachusetts; Barstow, of Flushing, N. Y., and Worthington, of Philadelphia, Pa., regretting their inability to attend this meeting.

Dr. Ray presented the report of the Committee on the nomenclature of disease:

The Committee appointed to confer with the committee of the American Medical Association on the nomenclature of diseases, hereby reports that it has attended to that duty, having conferred with Dr. F. Gurney Smith, on the subject.

I. RAY, Chairman.

The report was accepted, and the committee discharged.

Dr. Parsons from the Committee appointed to audit the Treasurer's account reported as follows:

TORONTO, June 6, 1871.

The Committee to audit the Treasurer's account have the honor to report as follows: Your Committee have examined the Treasurer's accounts, and the accompanying vouchers, and find to the debit of the Treasurer, two hundred and sixty-five dollars, from assessments. On the credit side of the account they find as follows:

Due from preceding year's account,.....	$28 93
H. C. Demming's bill, phonographic reporter,..	153 00
Messenger's bill,.....	5 00
Postage,.....	9 90
Theo. F. Scheffer's, bill for printing,.....	76 25
	$273 08
	265 00
Balance due the Treasurer,.....	$8 08

Respectfully submitted,

R. L. PARSONS,
JAMES R. DEWOLF,
C. H. HUGHES.

The report was accepted.

On motion it was

Resolved, That the Committee be instructed to report in regard to the assessment which may be necessary to meet the indebtedness of the Association.

Dr. Curwen presented his report as delegate to the American Medical Association:

As instructed by the Association at its last meeting, I attended the meeting of the American Medical Association which was held in San Francisco, during the first week of May last; was very cordially received, and presented to them the reasons why this As-

sociation did not think proper to unite with them, as they, for several years past, have requested. If it meets the wish of the Association, I will read my remarks to them as part of my report to this Association:

Mr. President and Gentlemen of the American Medical Association:

As the delegate of the Association of Medical Superintendents of American Institutions for the Insane, I am instructed to present to this Association the cordial greetings of that Association, and to assure the members of this, that, though engaged in the engrossing pursuit of a special branch of medicine, the members of that body have always entertained an earnest and hearty sympathy with this, and have sincerely and faithfully labored to promote its interests, believing that in so doing they were advancing the cause of true rational medicine. For several years, resolutions have been passed and delegates appointed to urge upon the Association of Medical Superintendents of American Institutions for the Insane, the propriety of giving up their distinct organization and becoming a section of the American Medical Association. That Association has been unwilling to agree to that proposition for reasons which appeared conclusive to the minds of all its members, and they have authorized me to state and explain the reasons for the course which they considered most wise and best to pursue.

That Association was organized in 1844, for the purpose of affording greater facilities for those engaged in the treatment of mental disorders to exchange views on the various subjects connected with that special branch of medical science, and thus promote not only the welfare of the insane, but advance the interests of medicine in its connection with mental disorders, and the proper construction and arrangement of hospitals for the care and treatment of those so afflicted.

It has been their rule in all cases to fix the place of their meeting where some hospital for the insane was located, and they have always endeavored in such selection to keep in view the urgent necessities of the insane, and the state of feeling towards that class which existed in any given community, and as far as their influence and advice could be exerted, to arouse that community to greater efforts for the relief of the suffering class in whose behalf they were laboring. With these principles steadily in view they have each year selected such places as seemed to them, on careful delib-

eration, to be most likely to be benefitted, or such as would from special examination and consideration of improvements in Hospitals there existing, be of most service to the members themselves in stimulating them to more earnest efforts in their own special fields. By means of such meetings and the counsel given, and the intercourse with the citizens of a special locality, the Association has been able, as they believe, to do a very great service to the insane by arousing a greater interest in their behalf, in urging more extended and more improved means for their care and treatment, in a careful examination of the arrangements of the hospitals at that special locality, and in calling attention to many matters on which a degree of apathy prevailed, but which needed to be revived in order to the successful prosecution of the work entrusted to them. It is obvious that a body numbering between sixty and seventy members, about one-half of whom met each year, would be able to hold meetings in places where a body of several hundred could not expect to find accommodations, and points could thus be reached and benefits conferred which could not otherwise have been reached and conferred.

Then in the discussion of subjects connected with the management and organization of hospitals, the details of treatment, and all matters having special reference to the insane, could be much more fully and thoroughly examined in a body which held its meetings for four days, and had generally three meetings each day, except when engaged in the inspection of hospitals, than in a section of this Association which met only for a few hours of an afternoon. In that Association it has frequently happened that the discussion of a given subject has occupied two days, during which every phase of the matter would be brought out and fully examined, and on all subjects of general interest affecting the welfare of the insane, the decisions have been reached with singular unanimity when even at first a great discrepancy of views seemed to prevail.

Many of the subjects thus discussed, would appear to a general practitioner of very slight importance, and unworthy of so much attention and discussion, but to those intimately acquainted with all the details of hospitals for the insane, these very subjects present difficulties which require the most earnest effort and most thorough study properly to overcome, and make them contribute to the comfort, and not to the annoyance of the insane.

By the terms of its organization that Association includes all those medical men who are in charge of hospitals for the insane in

any part of this continent of North America; and among its most valued members have been, and still are, gentlemen from the British provinces. By a union with the American Medical Association these gentlemen would be debarred the privilege of meeting with their brethren, and the other members deprived of the great pleasure and profit they have heretofore enjoyed in the various meetings in which they have mingled and interchanged views, with the utmost freedom and harmony to their mutual improvement and edification.

This report was received and will be entered in their transactions, and the report of the delegate to this Association last year, Dr. John L. Atlee, was read immediately after, expressing precisely the same views which the members heard from him when addressing this Association.

The action taken by that Association amounts virtually to an endorsement of the views we have endeavored to put before them. There is no delegate from that Association, and the President expressed to me privately the opinion that no union of the two bodies ought to be made.

The feeling of that Association, so far as I could learn, was cordial, and the members appeared anxious to have such measures carried into effect as may be wisest and best for the success of the cause.

On motion of Dr. Walker the report was accepted.

Dr. Curwen. Mr. President: It is probably known to some of the members of this Association that one of our former members who was with us many years back, but who for many years has been laid aside from the cares of active professional life, has lately died. I refer to Dr. Benedict, who died in April last. He was not known to the younger members of the Association, or those who have entered it since 1854, as his direct connection with it ceased in that year.

Dr. Nathan D. Benedict was born in Otsego county, New York, on April 7, 1815, where he spent a part of his earlier life. My acquaintance with him commenced in December, 1830, and it was my good fortune to be a school-mate of his for a number of years. We not only attended the same school together, but for nearly two years sat at the same desk. He left school in 1835, entered Rutger's College, at New Brunswick, N. J., where he graduated with honor in 1837, and immediately after commenced the study of medicine. He was graduated at the University of Penn-

sylvania in the spring of 1840, and at once engaged in practice in Philadelphia, where he was successfully pursuing his profession when he was appointed Medical Superintendent of the Philadelphia Almshouse in 1846. The zeal and energy displayed in the management of that institution, and in the alterations and improvements suggested and carried into effect with his usual tact and diligence, brought him to the attention of the Managers of the State Lunatic Asylum, at Utica, N. Y., when looking around for some one to take the place of Dr. Brigham, who died in 1849, and he received from them the appointment of Superintendent, in the fall of 1849, and at once entered on his duties. He gave himself, with all the earnestness and ability of a superior mind and warm heart, to the discharge of the duties to which he had been called. He displayed the same activity and spirit of improvement in securing the better ventilation and heating of the institution under his charge, which he had done in Philadelphia. He had arranged in all its details, and had begun to put into operation the plans for the ventilation by fans, and heating by steam, which have since been more fully carried out. While engaged in attending to the execution of these plans, and carefully supervising the construction of certain parts, he was taken with pneumonia, attended by profuse hemorrhage, which confined him to his rooms for months, and when able to be about, the physician he consulted particularly in reference to his case, recommended him to spend the winter 1853-4 in Florida, to check, it possible, a disposition to phthisis, which he was fearful would be developed by residing during the winter in New York. Returning north in the spring with restored health, and expecting to resume his duties at the Institution, he was required by the Managers to resign his position as Superintendent at once. This sudden change of all his plans and expectations was a great source of regret to him, as he was ardently attached to the specialty and possessed peculiar qualifications for the successful performance of all the duties of a Superintendent of a Hospital for the Insane, in his calm, winning manner, his equable, cheerful disposition, his firmness and earnestness of purpose, and his very clear conceptions and correct judgment in all matters to which he gave his attention.

After careful deliberation, he decided to make Florida his future residence, and removed to Magnolia, with his family, in the fall of 1855, and opened an institution for the care and treatment of persons suffering from affections of the lungs. He met with much success in the management of this institution, but the breaking out

of the rebellion prevented those who had been accustomed to resort there, or who might have designed to go there, from carrying out their plans, and the institution was almost entirely broken up. He was watched with a very jealous eye, and at one time was arrested and taken to Charleston, but was at once released by Gen. Beauregard, the officer in command. His buildings were taken in charge by the Federal authorities some time after, and used for a hospital, and he removed with his family to St. Augustine, where he continued to reside afterwards and filled several offices of honor and trust. He came north in the summer of 1867, and remained several months, but took cold, from the effects of which he never entirely recovered.

A letter was received from him in answer to the circular to attend the meeting of the Association, in which he had always expressed a warm interest, contains the following statement of his own health, and shows the calm Christian resignation he felt:

"If both lungs are now involved, then my course may be short, and in any event I may have too little strength to get through the summer. My stomach is so sensitive that it is difficult to find food that does not produce gastric irritation, giving me hot palms and hot feet, and disturbance of the bowels. This was my trouble last summer and I have it again now. I sit in my chair and write and read, but I can walk very little. I do not go down stairs. My expectoration is not copious, nor is my cough very troublesome. I do not sleep well. I retire at 6 and 7 and awake at 11 o'clock, and sleep little or none after that. Whatever and when is to be the result, I believe I am quite ready to go or to stay, as may be ordered. I would not choose for myself."

He died on April 30, 1871.

I offer the following resolutions:

Resolved, That this Association has heard with deep and unfeigned regret of the death of our late associate and member, Dr. N. D. Benedict, who was for many years an earnest, faithful, highly esteemed, and greatly beloved member of this Association, and that we most sincerely sympathize with his family in the great loss which they have sustained, and rejoice that they and we have an example in his life of all that was noble, pure, and true.

Resolved, That a copy of these resolutions be forwarded to the family.

Dr. KIRKBRIDGE. Mr. President: Before the question is taken on this resolution, I feel that I ought to say something in reference to our valued friend, the late Dr. Benedict. I knew him quite intimately for several years, and always thought him a remarkable man in many respects. His executive ability was very great. He showed this in his first prominent public position, which was that of Physician to the Department for the Insane of the Philadelphia

Almshouse. When he took charge there, there was no regular discipline or systematic organization. Everything was defective, and the Board of Managers was political in its character. Dr. Benedict introduced many important reforms, and he carried out, quite successfully, one of the earliest attempts at a forced ventilation for so large a building in this country. He earned much more credit in this work than he ever received. The ability he showed in the Philadelphia Almshouse, I have reason to know, led, in no small measure, to his selection as Superintendent of the State Hospital for the Insane at Utica, on the death of the late Dr. Brigham, and where, but for his loss of health, he would unquestionably have greatly distinguished himself and shown even greater ability than marked his course in Philadelphia. While at Utica he had a severe hemorrhage from the lungs, and after consultation with eminent medical friends, he resolved on a southern climate, and ultimately, after giving up his post, he retired with his family to Florida, where he continued to live up to the time of his death. Although his life was no doubt greatly prostrated by this cause, he always felt that he was in exile, and never ceased to regret that he was compelled to give up a branch of the profession to which he was deeply attached, but he did it with true Christian resignation. I endorse most heartily every word said by Dr. Curwen, and trust that the resolutions will be passed unanimously.

The PRESIDENT. The elder members of the Association remember this noble Christian gentleman, Dr. Benedict, with whom we had the honor, in years past, of being associated. I am not prepared to say more than express my hearty and cordial assent to every word that has been said in relation to him.

The resolutions were seconded by Dr. Kirkbride and unanimously adopted.

Dr. NICHOLS. Mr. President: It seems to me that the thanks of the Association are due to Dr. Curwen for the great pains he has taken, the long time used, the considerable amount of money he has expended in going across the continent, attending the meeting of the American Medical Association, and settling a question which has been a somewhat trying and vexed one for a number of years. I think the report which he has made to the Association an able one; and I have no doubt the settlement of the question

was due to the Doctor's personal intercourse and efforts among the members of the Association, as well as to his report.

I therefore offer the following resolution:

That the thanks of this Association are due and are hereby extended to Dr. Curwen, for the time and pains bestowed by him in attending the late meeting of the American Medical Association in San Francisco, and in happily affecting the permanent settlement of the long standing question of the union of the two Associations, originally proposed by the American Medical Association.

Dr. KIRKBRIDE. I concur entirely with what Dr. Nichols has said in regard to what is due to Dr. Curwen who has acted so efficiently in this matter, but there is also one other gentleman towards whom this Association ought to feel under great obligations, and that is the distinguished delegate from the American Medical Association to the meeting of this Association at Hartford. As you all know, I allude to Dr. John L. Atlee. After careful inquiry and ample personal observation, he took exactly the views entertained by us, and saw clearly, almost from the beginning, that it was unwise and inexpedient for us to unite with the American Medical Association. I have no doubt that his report and the decided views he entertained on the subject, aided us very much in bringing about what Dr. Nichols has very properly stated to be a permanent settlement of this question—a question which originated with gentlemen who undoubtedly wished us well, but who knew little of the working of this Association. Nevertheless, every one appointed to meet us as delegates left our meetings, as I believe, impressed with the conviction that the two bodies should not be united in the manner originally proposed in the American Medical Association.

The resolution of Dr. Nichols was agreed to.

Dr. COMPTON. If the business is disposed of, I have a resolution relative to the time and place of next meeting which I will read, if it is in order to do so, and have it referred without discussion:

Resolved, That the next meeting of the Association be held in the city of New Orleans, on the second Tuesday of April, 1872.

I move the reference of that resolution to the committee on the time and place of next meeting.

The motion was seconded and then agreed to.

Dr. WALKER. I move that the assigned business of the Association be now taken up. At Hartford last year, there were certain subjects specially assigned for this session, and I call for them now.

Dr. CURWEN. The first business before the Association is Dr. Jarvis's paper on statistics. Dr. Jarvis requested me to say that it would not be possible for him to be here until to-morrow, and he would be much obliged if the Association would defer its consideration until his arrival. I am informed by Dr. Workman that he will not be here until to-morrow afternoon.

Dr. COMPTON. I think there are several Superintendents here who have not had an opportunity to see these papers of Drs. Jarvis and Curwen. Unless the Association is very anxious to commence the discussion of these documents, I would suggest that we defer the matter entirely until to-morrow; so that, if there should be copies of those papers here, those who have not seen them would have an opportunity to look over them before they come up for discussion.

Dr. CURWEN. I move that the papers on statistics be laid on the table for the present, and that the Association proceed to the consideration of the other papers. The other papers are entirely distinct matters from this report on statistics. They are Dr. Jarvis' paper, Dr. Kirkbride's resolutions, and also my own paper which was offered, not because it belonged here, but merely to take up the time.

Dr. COMPTON. If it is the wish of the Association to go forward with the papers, I will withdraw my suggestion and second the motion of Dr. Curwen.

The motion to lay the report of the Committee on Statistics on the table for the present was agreed to.

The President announced that the business before the Association was the discussion of the papers of Drs. Jarvis and Curwen, and the resolutions of Dr. Kirkbride.

Dr. KIRKBRIDE. So far as these resolutions are concerned, I hope they will not require much discussion. I say that because they merely reäffirm principles that have been acknowledged by the Association on many previous occasions; originally, by a unanimous vote at Baltimore in the year 1853, and then subsequently by additional

resolutions passed at a meeting in Washington in 1866, with almost entire unanimity—the only difference of opinion being in regard to the number of patients that might with propriety be received into a hospital. These resolutions, when introduced at Hartford, were merely intended to show that the Association had not materially changed the views it had always held in regard to the fundamental principles which ought to govern bodies about to establish hospitals for the insane. At Hartford I am confident a very large majority, and I hope all the members then present, were favorable to these resolutions, but they were introduced just at the close of the session, and it was thought better, before taking a vote upon them, to have them deferred and discussed at the next meeting of this body, that members generally might have copies of the resolutions, and with your permission I will now read them.

(Dr. K. then read the resolutions. JOURNAL OF INSANITY, October, 1870.)

I would now simply remark that it has been suggested that a slight addition should be made to the fourth resolution so as to include other than the United States, and which I have done. As I have already said, there is nothing in these resolutions but what this Association has declared to be its convictions on at least two previous occasions; and I trust there is nothing in them that will not meet the approbation of the members now present, and that we will have action upon them here without much discussion. I have nothing more to say, unless there are objections made to them.

The PRESIDENT. Will any gentleman remark upon them?

Dr. LANDOR. These resolutions, if my memory does not fail me, were reäffirmed at Staunton, and I think we all concurred in their merits. I have been in the habit of quoting them, and appealing to them as representing the wisest principles that have been laid down in so brief a space, for the erection of institutions for the treatment of the insane, ever since we were at Staunton. I have quoted them in various reports. I was under the impression that they were settled for all time by the Association. They seem to be so self-evident in their merits.

The PRESIDENT. It is well, sir, to reäffirm self-evident truths.

Dr. KIRKBRIDE. I think it proper to explain to my friend the reason for the introduction of these resolutions at that time. Although I offered these resolutions, they are not entirely my own, but

but were prepared at the suggestion of a number of gentlemen then present. The reason for doing this was that certain gentlemen not connected with this Association, and possibly some others who are members of it, may have entertained views so diametrically opposed to the former declarations of the Association, that it was thought desirable by many of the members to show that we had not, at least as a body, changed our previously declared expressions on this subject.

Dr. Cook. Is it the opinion of Dr. Kirkbride that chronic insane should be retained in hospitals, or sent back to the counties? I ask the question because it is well known that the laws of the State of New York exclude a certain class of cases. The Hudson River Asylum is organized under the State asylum laws.

Dr. Kirkbride. Speaking for myself, I should say without any hesitation whatever, that I do mean, as the fourth resolution declares, that every State should provide enough institutions to accommodate all the insane within its border. It is my firm conviction that the poorest State in this country is perfectly able to provide just as many hospitals as are necessary. I do not believe any government has the right to say to one family, "we will take care of your afflicted one," and say to another, "we will not take care of yours," simply because one is a more recent case than the other. If we undertake to provide for a part of the insane, we are bound to provide for all. One family has just as good a right to claim the bounty of the State as another.

Dr. Cook. You would not exclude chronic cases?

Dr. Kirkbride. I certainly would not.

Dr. Compton. While I have no objections to the resolutions, and expect to give them my support, the language of the second one makes it necessary that I should say something in explanation of the management in Mississippi of this matter, in order to show that we are at least willing to practice what we preach.

The Lunatic Asylum of the State of Mississippi was crowded to its fullest capacity in 1859. The superintendent states in his report of that year that he had been compelled to send patients home for want of room. He recommended an enlargement of the institution. He failed, however, to get an appropriation from the legislature.

Then the war came on and suspended, at once, all calculations for enlargement. Since the war the finances of the State have been very much crippled. The result is that the institution has not been enlarged, but on the other hand has been filled with

chronic cases, to the exclusion of the acute and curable ones. There are a great number of cases of dementia and harmless imbecility. Last year I urged upon the legislature the importance of at once erecting two wings, one for males, and one for females. The legislature very promptly appropriated $150,000, and the work is now going forward. Last January, the authorities at Vicksburg concluded that they could not keep up their city hospital any longer, and proposed to turn it over to the State, if the State would provide for the pauper sick of the city. I took advantage of that proposition to urge upon the legislature the propriety of allowing me to send about forty harmless cases to that institution, without regard to their curability or incurability. The hospital at Vicksburg was not built for a lunatic asylum; but in order to make room for the acute insane who were clamoring at our doors, I urged upon the legislature to take the hospital, and allow me to send the number I have stated to it. I do not regard this as coming in conflict with the spirit of the resolution alluded to. Some of those I sent were curable, and some of them were incurable.

Dr. KIRKBRIDE. I would remark to Dr. Compton that these resolutions had no reference to cases like that. We are all compelled to do the best we can, under peculiar circumstances. They were intended to assist those applying for legislative aid in the different States. I believe, as I said, that all the insane ought to be provided for in every State, and I fully believe every State is abundantly able to do so. I believe, further, that this Association may exercise a most important influence when application is made to legislative bodies for the erection of new hospitals.

Dr. HUGHES. I would like to ask of the older members of the Association, and of Dr. Kirkbride in particular, in regard to the first resolution, whether in reäffirming in regard to the construction and organization of hospitals, it has reference to the number of inmates that ought properly to be placed in these institutions. If my memory serves me correctly, the Association has contradicted itself in regard to the number of cases. At one time it affirmed 500, and at another 250, as the maximum number which ought to be treated in one hospital.

Dr. KIRKBRIDE. In writing that resolution, I was disposed to leave gentlemen to put their own construction upon it so that those who wanted 600, could be governed by the resolution adopted at Washington, and those who wanted 250, by that originally adopted at Baltimore. It will be found that in regard to this point about half a dozen of us were in the minority at Washington, and we

would not commit ourselves to a larger number than that originally adopted by the Association. We still thought that number the best, but did not mean to say circumstances might not often lead, almost as a political necessity, to the erection of larger hospitals.

Dr. HUGHES. That is the question I would like to see discussed at this meeting. To me it has been an important question, and it is also such in States where the question of further provision for the treatment and accommodation of the insane is now coming up. On looking over the proceedings of the Association to guide me on that subject, I found that at one time 500 was the number, and at another 250, deemed proper to treat in one hospital.

Dr. KIRKBRIDE. I think the resolution says it may be carried to the extent of accommodating 600.

Dr. NICHOLS. That 600 may be the maximum.

Dr. CURWEN. The resolution, as passed in Washington in 1866, reads thus: "The enlargement of a city, county or State institution for the insane, which, in the extent and character of the district in which it is situated, is conveniently accessible to all the people of such district, may be properly carried, as required, to the extent of accommodating 600 patients, embracing the usual proportions of curable and incurable insane, in a particular community."

The first resolution was adopted by a majority vote.

Dr. BROWN, of Bloomingdale. I move that the further consideration of the resolutions be deferred until to-morrow. I understand there will be some gentlemen here then who would like to remark upon this resolution.

The motion was not agreed to.

Dr. BROWN. The reason I made the motion to postpone was out of a desire to know the experience of those not here to-day. I understand that my friend, Dr. Chapin, of the institution at Ovid, N. Y., is likely to be here to-morrow, and he will give the Association some interesting facts.

Dr. KIRKBRIDE. I do not want to seem unreasonable; but I confess that when, at one meeting of the Association, certain subjects are set down for consideration at another meeting, and notice of the fact is given to every member, it seems to me to be trifling if we pay no attention to these subjects because some one or more

of the members did not make it convenient to start from home so as to be present at the time fixed. For that reason I feel inclined to oppose the putting off the consideration of these subjects. I should very much like to have the sentiments of Dr. Jarvis and Dr. Chapin, but I am sure no one has a right to ask such a postponement. Under all the circumstances, however, if it is the general wish, I will not object.

Dr. NICHOLS. I move the reconsideration of the vote by which the Association refused to postpone the subject until to-morrow.

Dr. COMPTON. I would like to ask if it is probable that these resolutions will come up during this session for discussion, if they are postponed now. I would like to hear the discussion of them, and if Dr. Brown will promise a debate to-morrow, I am willing that they should lie over. But if they are to be postponed from time to time, I am in favor of going forward and disposing of them now.

Dr. BROWN. My reasons for the suggestion relative to postponement are these; my views are perhaps well known to those belonging to the Association. It is proposed to solemnly affirm the phraseology and sentiments of this second resolution. We have had in the State of New York for the last year an institution, the first of its kind, prepared especially for the care of the chronic insane; and the gentleman who has charge of that institution is likely to be here to-morrow. It affects that class of cases very materially, whether fortunately or otherwise, and to gentlemen who have in charge State Hospitals, with a multitude of chronic cases, it is a matter of considerable importance to know the results of his experience. It is in behalf of that interest and desire that I made this suggestion.

Dr. COOK. I would like to add one word to what Dr. Brown has said. As he remarked, it is well known that an institution has been erected for the care of the chronic insane in New York. I will simply state one fact here in connection with it. The asylum for the chronic insane of the State of New York is exclusively for them, and a State hospital organized under the old lunacy law declines to receive them. What is to be done with the State of New York under the circumstances? I must confess that I am not in favor of sending a single patient back to a county house; therefore I am in favor of such provision as shall care for all.

Dr. NICHOLS. I was tempted to say very nearly what Dr. Brown has said. I am prepared to vote on these resolutions at any moment without any material change; but it seems to me that,

inasmuch as it had been asked in behalf of a member of the Association, (who, it is presumed, cannot be here now, or he would be, and who is expected to-morrow,) courtesy requires the postponement of the vote until he comes. That is the object I have, and my friend, Dr. Kirkbride, has said he is willing that these resolutions should be postponed until to-morrow. I therefore renew my motion that the consideration of these resolutians be postponed until the arrival of Dr. Chapin, if it takes place to-morrow.

Dr. WALKER. I certainly, sir, am willing to extend any courtesy possible to any absent member of this Association on this, and all other occasions; but before we vote upon this, before we disturb the deliberate vote of the Association last year, making this the first business of their meeting, I desire to call attention to a like matter. In New York in 1863, a Committee of which Dr. Ray was Chairman, had referred to it the subject of a uniform law on the subject of the legal relations of the insane. Dr. Ray performed that duty at a great expenditure of time and labor, and in the following year, at Washington, made his report. The matter was expected to come up for discussion, but some members were not present, and it was postponed. It was postponed from year to year until 1867; then it was called up in Philadelphia, and again the members were not prepared to proceed to its consideration. It was then deliberately voted that it should be the first business before the Association in Boston in 1868. Accordingly on the first day of the session the matter was called up, and we all know how we came near putting it off a day or two to accommodate tardy members. But the Association voted that it was an important question, and should not be put off for a single day longer. You know, Mr. President, how narrowly we escaped; it having been postponed from May, 1863, to June 1868, to satisfy the convenience of some one or other member of the Association. I refer to it that it may be a lesson to us. This matter was specially assigned for consideration at this meeting. I believe it will call out considerable discussion. Those who are absent now can be heard when they come. I think we ought not to delay the business of the Association to satisfy the convenience of any individual member. For one I should not feel like asking you to do this for me, and it should not be done for others. I hope the motion will not prevail.

The motion to reconsider was agreed to, and on motion the Association adjourned to 2 P. M.

AFTERNOON SESSION.

June 6, 1871.

The Association was called to order at 2 P. M., by the Vice-President, Dr. Nichols.

The Committee on Business reported that the first business in order was the reading of a paper by Dr. Landor.

Dr. Landor then read his paper on "Insanity in relation to Law."*

Dr. HUGHES. I would like to ask Dr. Landor whether he takes the ground that the volitional action of the mind is the result of molecular disintegration?

Dr. LANDOR. Yes, certainly.

Dr. HUGHES. I can readily conceive and I am prepared to admit that certain defined, distinct, and varied actions of the brain may be the result of molecular disintegration, as in the case of muscular action after the operation of the will. I believe most physiologists now teach as the result of their experiments, that muscular action is the result of molecular disintegration—that is, that the molecular decay precedes life. In regard to the fatal actions of the brain, (if I may be allowed to use the expression,) I would be willing to subscribe to the paper of Dr. Landor; but it seems to me an unwarranted stretch of logic to say that the volitions of the mind are the result of disintegration of matter. All who have undertaken to demonstrate this doctrine, it seems to me, have failed in their logic, as much as Mr. Darwin has failed in his origin of the species. It does not follow because that looking-glass is against the wall, that it proceeds from it. It does not follow because an article rests upon the floor, that it must necessarily proceed from it. Logic will not allow us to make these deductions nor similar ones in regard to actions of the brain and mind.

Had Dr. Landor, and those who advocate his doctrine asserted that mental action was coëxistent with cerebral disintegration, then, sir, we would have to subscribe to the facts; but to infer because we have been enabled to discover the products of brain disintegration in the secretions, and because this disintegration is in

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proportion to the amount of mental action observed, that therefore the mental action is the consequence of this breaking down of brain tissue, is, in my opinion, entirely illogical. I can not subscribe to the belief that thought results necessarily from the disintegration of brain matter, any more readily than I could subscribe to the idea that the omnipotent fiat of the Almighty followed, instead of preceded, the act of creation. I believe the human mind is, in some measure, so far as the volitional use of the intellectual and moral faculties are concerned, the image of its Creator.

The mind may create and develope brain power, and increased brain power may increase and aid the power of mental manifestation. I do not think, when mind was created, it resulted from physical disintegration, nor do I think that thought can be proven to result from disintegration of the physical structure of the brain.

Dr. Compton. My connection with our specialty has been for such a short period that I do not feel warranted in taking advantage of your politeness and courtesy to detain the Association with remarks which I might otherwise be induced to make upon the very interesting paper to which we have all listened with so much attention. I feel, Mr. President, that my feet have scarely pressed a point beyond the threshhold of the temple of study which I see opening before me, and perhaps I should not say anything at all. I desire, however, to call the attention of the Association to a Mississippi law touching the criminal insane, and I mention it as much to invoke the opinion of our celebrated medico-legal friend, Dr. Ray, as anything else. We have a law in that State which provides that when the plea of insanity is offered in a case of assault and battery, manslaughter or murder,—this plea is tried on its merits, separate and apart from the general question of fact connected with the crime. The accused is tried before a chancellor and not before a jury, and if the plea of insanity is sustained, the indictment is set aside, but the party may be sent to the lunatic asylum for any number of years. We have one now in our institution who has been sent there for twenty years, who was under indictment for the murder of his brother. In his case the plea of insanity was sustained before a chancellor.

Now, I would like to ask the opinion of the Association, and especially of Dr. Ray, as to the correctness of this law, and whether it does not invade too much the prerogative of the Superintendent, and tend to make him a jailor, rather than a physician. For instance, the man to whom I allude may get well long before

the twenty years expire; if so, he would certainly be entitled to a discharge at the hands of the physician, when under the law he would be still restrained by the Superintendent.

Dr. KIRKBRIDE. In case he would not have been found insane, would he have been convicted of murder in the first degree?

Dr. COMPTON. That was the indictment.

The VICE-PRESIDENT. Perhaps the Chair had better state, at this stage of the discussion, that the Association has recently expressed its views upon this very question, after very mature deliberation and discussion. It will, however, be proper, I conceive, for the members of the Association, in discussing this paper, to make such reply to Dr. Compton's inquiry as they may see fit.

Dr. BANCROFT. I was deeply interested in the paper, and am very thankful to Dr. Landor for reading it. I rise simply to say, as a word of encouragement in the direction indicated by Dr. Landor, as a fact, that in the State of New Hampshire, for the last few years, it has been the practice of the Attorney General of the State, in prosecuting cases of crime where the defence of insanity was set up, to proceed to the trial in the way which I understand to be indicated by the paper. He has, in all these instances, so far as I know, called into the case men who are devoted to the specialty of insanity, and requested them to use all means in their power to arrive at truth in the case, both by examining the criminal previously to the trial, and the facts which may be brought to light in court. These medical men are brought into court to hear all the testimony in the case, and at the close are put upon the stand as expert witnesses. So far as I know, the Government and the Court have given the experts every facility for investigation, and ample opportunity to explain any opinions they may have formed; and these opinions have been recognized by the Court in instructing the jury. Several cases conducted in this way, within a few years, have come to an issue contrary to the popular feeling, and acquittal by reason of insanity has been the verdict. In these cases, the Attorney General has cordially acquiesced in the views arrived at by the experts. I refer to these facts, in this connection, as evidence of progress in the administration of justice.

Dr. BROWN. Is the expert called by the Attorney General only, or by the prosecution or defence?

Dr. BANCROFT. So far as I know, the experts have been notified by the Attorney General, as soon as the case was fixed for trial, that they would be called as expert witnesses, and requested to

visit the criminal as often as might be necessary for a thorough knowledge of the case; and the most ample opportunities have been given.

Dr. BROWN. At the Attorney General's own instance, or upon application of the counsel for the defendant that that would be the nature of the appeal?

Dr. BANCROFT. At the instance of the Attorney General, on being notified that insanity is to be the defence, and at the expense of the public. The Attorney General has adopted this practice as better adapted to secure the ends of justice.

The VICE PRESIDENT. May I inquire whether this has been done at the discretion of the present Attorney General, or whether there is a legal provision requiring it?

Dr. BANCROFT. There is no law. It is simply a reform which has been brought about by the present Attorney General, and I am aware, too, that the courts are equally satisfied with the workings of it, and have given their unqualified approval to that course. In one instance the experts summoned by the Attorney General formed the opinion that the plea of insanity was true, and by mutual consent of the Attorney General and the counsel for the defendant, the cause was submitted to the jury without arguments. In the six trials of this class, within the last seven years, in the State, the verdicts have all coincided with the opinions of the experts.

Dr. DICKSON. This is the first time I have had the honor of meeting the Association, and as I was not present when the first part of the paper was read, I have no remarks to make upon it.

In relation to Dr. Bancroft's remarks with reference to the course pursued with experts in the United States, in allowing them opportunities of having private interviews with parties before requiring them to give evidence in open court in regard to their sanity, I must state that the same plan does not obtain in Canada. I have frequently been summoned before the courts as an expert in criminal cases where the plea of insanity had been attempted to be established, but I was never accorded the privilege of having had a private interview with the patient beforehand.

Our lawyers seem to imagine that an expert ought to be able to give testimony as to the sanity of a prisoner from simply observing his actions in court, and if Dr. Landor's paper will teach lawyer's to form more correct views on this matter it will accomplish a great deal of good.

In some cases the counsel for the crown may not know that

the plea of insanity will be urged, and he may not have the opportunity of affording the expert time for an interview with the prisoner. But when a criminal is convicted and sent to the penitentiary, if he is supposed to be insane, the surgeon of the penitentiary and the Medical Superintendent of Rockwood Asylum are, by law, constituted a board, and they examine the criminal from time to time, until they become satisfied of his condition. If in their opinion he is insane, he is forthwith removed to Rockwood Asylum.

Dr. NICHOLS. Dr. Landor in his paper spoke of the number of criminal lunatics found in certain prisons. Have you formed any opinion of the number of persons convicted of crime and sentenced to your prison who proved to he lunatics?

Dr. DICKSON. I could not from memory, without referring to the prison statistics, give the exact number. Forty of the patients, however, now under my charge in Rockwood were sent from the penitentiary, but some of them have been several years in the asylum. The number of those who became insane during their incarceration amounts to about one-half of one per cent. of the whole convicts.

Dr. WORKMAN. Was the plea of insanity raised in any of these cases?

Dr. DICKSON. Yes, in some instances, but not that I am aware of in any of the half of one per cent. cases to which I refer.

Dr. WORKMAN. Have you the separate system in your penitentiary?

Dr. DICKSON. The convicts occupy separate cells at night, but they are associated at their work during the day. They are not allowed to speak to each other, however. It is the silent system. But the government is going to introduce the solitary system for a portion of all sentences, and the solitary prison is now in course of construction.

Dr. HUGHES. I was going to ask Dr. Bancroft whether it has been the custom in his State to take the position whether he wishes to go before the court upon hypothetical cases, stated to him?

Dr. BANCROFT. It is the practice in our courts to make a hypothetical case, but I think sufficient liberality is shown to experts in the way of doing it. Indeed, in most cases, after the testimony in matters of fact has been put in, the experts have been requested by the Attorney General to assist in arranging the hypothetical case from the mass of the testimony which is supposed to include every material fact put in, and truly and fully represent the case on trial.

Dr. RAY. Does not the counsel on the other side make up their hypothetical case just the same?

Dr. BANCROFT. Yes, sir.

Dr. COOK. I do not propose to enter into general discussion, but merely to mention a certain fact in connection with some recent trials in the State of New York. It is where the court has appointed an extra judicial commission, although there is no law whatever for it, so far as my knowledge extends. The commission was composed of five physicians to examine the prisoner and make a report in writing to the court. In one case, as the result of that action, the commission reported that the man was insane. The case then went to the County Judge and to a jury, and the person was pronounced insane. In the second case the judge took the same course and the jury discredited the opinion reached by the commission. The prisoner then went to trial, and was convicted, notwithstanding the opinion reported by the commissioners appointed by the court. The prisoner now stands convicted of murder.

Dr. LANDOR. How long a time did it take to form an opinion?

Dr. COOK. In one case, five or six weeks; in the other, about two months.

Dr. BROWN, of Bloomingdale. At this stage of the proceedings I have no remarks to make. The paper was certainly interesting. Its secular interest and moral scope are too learned in their bearing for me to make any comments upon, with interest, without preparation. At a later stage of the session, I may have occasion to refer to some of the propositions made by the Doctor.

Dr. RAY. I have very little to say in regard to the paper, except to express my hearty approval of it. I can truly say that there has seldom been a paper read before this Association in which the true doctrine of insanity and of law has been more sensibly and more felicitously expressed than in that paper. I hope that some of the points, especially that of the definition of insanity, will be taken deeply to heart by the members of this Association. It has been regarded as one of our weak points, you know, that we are unwilling, perhaps unable, to give a definition of insanity. Lawyers tell us, "You say this man is insane; you take certain acts and certain speeches that he made, and regard them as indications of insanity. Now such things as these we witness oftentimes in sane persons—in men you do not deny to be sane; therefore we can not agree with you. Unless you tell us what is insanity, in a few words, we shall not subscribe to your notions."

Nothing can be more absurd than such an idea as this; an idea which is not confined to the public at large, or even the legal profession. It occurs in the medical profession. What should we say to the man who should tell us, on the strength of such a reason, that he did not agree with our diagnosis of a pulmonary disease? "You have been pounding his ribs, and examining his expectorations, &c., yet because you can not tell us in ten words what the pulmonary disease is, therefore we do not believe your diagnosis." That is precisely what we are asked to do in regard to insanity.

We repudiate the idea that the mind is a unity, an independent entity, or that it is the result of some mysterious action, incidental to and not necessarily connected with the brain. We do not heartily recognize the fact of the different portions of the brain being, each to a certain extent, an independent organ, whose action constitutes to that extent, mental manifestation; and although we theoretically suppose that every portion of the brain is necessary to the mind in some shape or other, yet in the matter of practice we seem to forget it entirely. We do not ask whether this or that phenomenon is the result of disease, but whether we are dealing with disease of the mind. It is plain to me, and shown and established by pathological and physiological facts, that various manifestations of mind are necessary requirements of our nature; and consequently are made dependent on different portions of the brain, just as different forms of pulmonary disease are connected with certain parts of the lungs; and yet with these facts staring us in the face, we are required to give a definition of insanity; and until we can give it, our opinions are to be of no effect in judicial cases. There seems to be great indisposition even on the part of the medical profession to look at this matter in the proper light.

A signal illustration of this fact was displayed in the celebrated Windham case, adjudicated in England a few years ago. Some of the experts, in considering the question of his competence to care for himself, confined their attention to his intellectual manifestations, and because he could reply to a note of invitation to a dinner, and cast up a few figures correctly, they were ready to pronounce him competent, while the fact that he married a disreputable woman, knowing her to be such, having witnessed her cohabitation with another man the night before his wedding, was regarded as of no account.

The question that has been asked, whether a person who is convicted of a capital crime on the ground of insanity can ever be released, even if he has recovered, is not easily answered. Under

the English practice, I believe, no such person was ever released. However plain and conclusive the fact of recovery might be, he was still considered a proper subject for confinement. If he were insane once, he might be again. In this country the Legislature and the executive have had a wider scope, and the practice has been universal to discharge all who seemed to have recovered. I doubt whether any man has been confined long after he has given evidence of recovery.

Dr. W. I. Palmer was introduced as the Superintendent of the Institution for the Deaf and Dumb of the Province of Ontario, and formerly Superintendent of the Institution for the Deaf and Dumb of North Carolina.

The President stated to Dr. Palmer that the Association would be glad to hear any remarks which he might be willing to make upon the paper before it.

Dr. PALMER. I did not hear the reading of the paper. You are well aware of the interest I have taken in institutions similarly conducted, yet I have very little experience upon this particular subject. However, I wish to call attention to an instance in my native State, (North Carolina,) in which an uneducated deaf mute was tried who murdered a man in the native county of Dr. Grissom. They did not know how to dispose of the case, and so they sentenced him to the insane asylum. The sentence was never carried out.

Gentlemen of the Association, it affords me pleasure to meet you. I have no doubt that your meeting here will be both pleasant and profitable.

Dr. WORKMAN. I have never listened to a paper in the Association that I admired more than the one read by Dr. Landor. I do not say that I endorse all his sentiments. I am not so much inclined to dip into theology, I suppose, as the Doctor. Still I admire the manliness with which he has expressed his convictions. We all know there is risk in an expression of this sort; but I think when a brother comes out, and gives his convictions, we should stand by him for a free investigation.

In regard to the legal phase of Dr. Landor's paper, I entirely coincide with him. I think there is great room for improvement in the trial of such cases in this country. It has been my fortune

to be called into court, and sometimes to be harassed a little, more especially in the Court of Chancery. Questions are put to us the terms of which the parties putting them do not themselves understand. I have sometimes been questioned in that way, and have requested of counsel to give me a definition of the terms employed, but have been refused this favor. If we are reviled because we give no definition of insanity, why should not those who revile us give us their definition? In one case I was told that was my business, when I desired to know his definition.

I think it is always best for medical witnesses to be as cautious as possible. We know what little stress the courts place upon our answers. I once got an intimation that I would be committed for contempt of court because I declined to answer as to my opinion. The Chancellor came to my rescue. He said that I was not required to furnish opinions, and I therefore took the occasion of standing upon my position.

In regard to the disposition of criminal lunatics as in cases mentioned here,—persons who have committed crime and have been acquitted on the ground of insanity,—the course here is to commit them to an asylum, and there they remain during the pleasure of the Governor or the Lieutenant-Governor of the Province.

Now it is my opinion that in cases of homicide there ought to be great circumspection in regard to the liberty of that man again. I do not say that we should convert an asylum into a penitentiary, but I think great care should be taken. Take the woman who in a frenzy of acute mania, takes the life of her family. I think there is no likelihood of a recurrence of such a thing as that. I have recommended sending some such persons home when recovered; but when a man has committed deliberate murder, I would have much more hesitation.

Dr. KIRKBRIDE. After all that has been said and with most of which I fully agree, I have but few remarks to make. There is one point, however, to which I wish to make some allusion, and that is in reference to the Pennsylvania system of prison discipline. This has been called the *solitary* system, but it is not so. We have no such system in Pennsylvania. The system of prison discipline in use there is the *separate*, but not the *solitary*. Convicts are not allowed to see each other, or to hold any communication with each other. They are not solitary however: they see the officers of the prison, the keeper, the superintendent of the work, the physician, the moral instructor, and the members of the prison discipline society, which is composed of some of our best citizens. Now, if

the gentlemen who spoke of a system of prison discipline, as inducing insanity, alluded to this separate system, I wish to say to him that there are no facts to justify such an opinion. The most careful investigations, in my judgment, have shown conclusively, that there is really less insanity in our Pennsylvania prisons conducted on the separate system, than in any of the congregate prisons in the United States, and that a large part of what is there, is really in persons who were of unsound mind at the time of their admission.

In regard to the liberation of persons acquitted of criminal charges, on the ground of insanity, I agree fully with Dr. Workman. I have always believed that, except under very extraordinary circumstances, a person who has taken life in a state of insanity and been acquitted on that ground, ought not to be released. The exceptional cases are just what Dr. Workman has mentioned. It does often seem hard for the particular individual; but it would be still worse to have others, who had committed no crime, exposed to a similar occurrence. Let every such case be treated with the utmost gentleness and consideration; but let those who have committed no offence, be properly protected. In Pennsylvania, only a few years since, it was not uncommon to have a man acquitted on charges like these, on the ground of insanity, and to see him on the streets in a few days without there having been any pretence of his having been subjected to treatment, or indeed of being restrained of his liberty. The present law, based on the recommendations of this Association, is a wonderful improvement, and the scenes we used to witness, and which rendered many of these judicial proceedings little more than a farce, can hardly, hereafter, be possible.

Dr. Nichols. Before the discussion closes, or Dr. Landor makes such reply as he shall see fit to make to the remarks of the members upon his paper, I wish simply to say that I was very much interested in the paper, and consider it an extremely valuable one. I think I can subscribe to everything that the Doctor read with reference to the relation of insanity to law. I feel, as my friend, Dr. Brown, does, that in relation to the metaphysical questions discussed in his paper, I am unable to offer opinions without careful preparation.

Dr. Landor. I have a few words to say to my friend, Dr. Hughes. He characterized my logic as being rather deficient. I wish, in a very friendly manner to retort upon his logic. I cannot perceive the force of the comparison between the wall and the

looking-glass, or how it should proceed from the wall because in juxtaposition to it. I do not think such a comparison is applicable to any theories of the evolutionist. Because vital phenomena can produce vital phenomena, I do not think that therefore dead matter, in juxtaposition to dead matter, can give life to dead matter. There is not a period of life that decomposition is not going on—not only in the brain, but in every part of the living body; that is, atoms are worn out and absorbed, and new ones deposited, from the time of birth to the point of death. I must say my friend has used the wrong term when he called that the operation of disintegration. I think that is not justified by my paper. I can not say where life is; we can not trace all the processes, nor do I pretend to any such knowledge, but I do hold that mind and matter have that inseparable action. It is very hard, in these discussions, to find appropriate language to express thoughts upon these matters. We inevitably meet with great difficulty in selecting fitting terms. That I might have used terms that could have better expressed the meaning, is most likely. I may have misled my friend. I think we shall know these things completely as knowledge progresses. It may not be in our time, yet our successors will be aware of these processes. I have not professed to say that we are perfectly advanced in knowledge of science; but with how much have we become acquainted,—how much have we gained in knowledge by the microscope? Is it vain to hope that we will yet advance? Is there any age in the world which has advanced as the world has in the past fifty years? May we not reasonably hope that the time may be near at hand when we will be wiser on the subject than now? If I can not agree with Dr. Hughes upon this point, I can not agree with him upon the other, which involves the question of morals. When Dr. Hughes states we are created in the image of the Deity, it seems to me rather a vague expression, not applicable to our bodies or minds, which, if followed logically to its results, involves something like blasphemy. How can that mind be like the Deity which we find disordered in the asylums,—how can that Deity, which guides the world, be insane? It seems to me that if such were the case, and we were literally the image of our Creator, with minds part of His spiritual nature, as Dr. Hughes implies, we could not find our minds diseased as they are, nor disordered by cerebral action. If I am a materialist, I am a materialist in this sense, that I believe thought emanates from the brain, explain it how you may. In believing there is a Creator, I am no such materialist. I believe there is a Creator who conducts the

universe, and does what is right. I think I have now replied to most of the remarks of Dr. Hughes. With regard to those cases which are cited with relation to law and insanity, many of them are familiar to me: but if there is, in the State which Dr. Bancroft represents, any such system, employing State authority to select medical men to give opinions upon insanity, and sufficient time is allowed to form an opinion, that is the very principle I am advocating. I believe that sufficient time should be allowed to the expert to compare the mind of the alleged lunatic with itself; that is why I asked the question of the Doctor from New York, "How long they were allowed to form their opinion?"

This is a wise system which I would advocate, and not that they should be called, as I was called a few weeks ago, in the case of a man tried in London. I was to be locked up for an hour and then go in the court and testify. I would not do it, as I do not pretend to tell in an hour whether a man is sane or not. I said to the solicitor, "If you will send him to the asylum for three months, I will give my opinion." I have been called over and over again to give my opinion, and I said I did not know. All the lawyers may talk until they are deaf; I will not give an opinion upon such narrow grounds. That is the point upon which I want medical men to law down the law—that they must have sufficient time to compare a lunatic's mind with itself. There are some men clever enough to deceive an expert in an hour's examination; but place them in any asylum for three months, and they will not deceive any of us. We ought to have this medical experience with time to form opinions, and ought to be associated with the judge whose duty it is to give an opinion, not called on one side or the other.

Dr. WORKMAN. *Amicus curiæ.*

Dr. LANDOR. Yes, sir. It is better to be at hand as counsellor to the judge on matters purely professional, with which the judge can not be acquainted. He had better be kept under observation until a man can form an opinion. That is what I wish medical men to impress upon lawyers and legislators in order to have a system by which justice can be done between man and man.

I do not like the system carried on in the penitentiaries, except in the penitentiary at Detroit, which is conducted upon philanthropic and Christian principles. That men should be separated and not allowed to communicate, the general result of which is that one in 140 becomes insane after being placed in prison, is a great reproach on the way we treat our criminals. We should not bring on insanity by the mode of imprisonment. We ought to

establish a system towards even the worst criminals of the country, that would not allow such a proportion of men to become insane. It is this part of the paper which I wish very much to be examined. I have had copies of the paper printed which I shall be happy to give to every member of the Association.

I do not care very much about what Dr. Brown may call the morals or ethics of the paper; but that in regard to the opinion of the essay on the treatment of the law.

I am exceedingly gratified by Dr. Ray's approval, a man of world-wide reputation; and any man may be gratified when there are words of commendation from him.

Dr. HUGHES. I would like to ask the Doctor a question—whether he does not state that the actions of the mind are the product of the brain?

Dr. LANDOR. That is what I state.

Dr. HUGHES. In the remarks which I took occasion to make, I based them upon that statement. It is not the facts that I attempt to gainsay. I do not take issue with the facts in this paper; nor do I take issue with the materialistic tendency of these doctrines; but upon the logical inferences which are drawn from these facts. I do not deny that accompanying all mental action, there must be cerebral disintegration, and that therefore there must be a breaking down of nerve cells and a wasting away of nerve matter. I will go further and say, if you please, that the nerve cells may be denominated the carriers of thought, by which thought is transmitted to the outer world, that, in proportion as the organization of the brain may be perfect or imperfect, just in that proportion will be manifest to the outer world perfection or imperfection of mental action. But the inference that mental action, immaterial thought, is the result and product of material changes, I do not believe to be correct. I can not consider that a logical deduction from the facts.

I think this paper is an able one—the points well made and the positions well stated. I deny no facts; I do not deny that when the brain is under the influence of mental action it undergoes decay—that you may find results in the urine and other secretions to establish this, and that in proportion to the amount of mental action will be the amount of brain decay; but the inference that mental action results from cerebral disintegration, is one which, according to the construction of my own mind, I can not admit.

Dr. LANDOR. With your views why do you give hydrate of chloral to calm mental action, when you do not think it would result from action of the brain? Why do you expect to act upon the mind by the use of hydrate of chloral?

Dr. HUGHES. Why do you bring upon the patient pleasing influences to operate upon the mind?

Dr. LANDOR. That is no analogy.

Dr. HUGHES. Why do you produce pleasing thoughts? Of course the operation of hydrate of chloral, I suppose, none of us understand. I do not think that would materially affect this question. I might answer that question in this way. Any remedy which would retard the disintegration of brain matter, as for instance our coffee and tea (as has been asserted by some theorists in regard to alcoholic stimuli) may diminish that diseased state of the physical structure of the brain upon which mental disorder is manifest. But it is not well sustained to assert that, because the brain breaks down, the spiritual person is diseased.

There being no further remarks upon the paper, it was laid upon the table.

The PRESIDENT. The Association will please give attention to the reading of a paper by Dr. Ray.

Dr. RAY. The question is often asked, whether by some practicable change in the present method of taking the testimony of experts, the objections now existing against such testimony may not be obviated. During the last summer I was requested to prepare a paper to be read before the Social Science Association, that was to meet in Philadelphia, and in complying with that request, I concluded to take this subject. The paper was heard by nobody here present; for that reason, and for the reason that I have since had an opportunity of maturing my views, and especially as it is a subject of paramount importance to the members of this Association, I have concluded to offer it at present, not so much that I have any new facts to present, as that it necessary for us who, as a class, are called upon oftener than any other to give testimony, to know a little more definitely and exactly where we stand upon this subject, and a little more as to what the community have a right to expect, and what it has a right not to expect. For these reasons I venture to read the paper here.

Dr. Ray then read his paper on the "Evidence of Experts."

On motion of Dr. Gundry, it was resolved that the Committee on Business be instructed to procure another room for the sessions of the Association.

On motion of Dr. Kirkbride, the Association adjourned to meet this evening at 8 P. M.

EVENING SESSION.

The Association was called to order at 8 P. M., by the President, who announced that the business first in order was the discussion of the paper read by Dr. Ray.

Dr. McDill. Before proceeding to the discussion of the paper, I have a proposition to submit to the Association, which I ask to have referred to the committee on the time and place of the next meeting. "The Trustees and Officers of the Wisconsin State Hospital for the Insane, respectfully invite the Association to hold its next annual meeting in Madison, Wisconsin."

Mr. Hastings, (Secretary of the Board of State Charities of Wisconsin.) Mr. President: I suppose that of course the Association, in holding these meetings, looks mainly to its own convenience and the accomplishment of its own purposes. When they can at the same time gratify the community by their presence, they doubtless will endeavor to do so. I think we can offer to this Association everything they want to facilitate their objects. We have an insane hospital, located near Madison, which is convenient of access. You all know, also, that Chicago is a great railroad centre, and it is on the direct route to Madison, and probably you are aware that Madison is one of the most beautiful cities on the continent. We can give you an excellent place for meeting,—the Senate chamber of the State capitol. I have the pleasure to say that the city of Madison, through its government, has extended you an invitation, and that the State, through its Governor and officials, have also extended you an invitation to visit our city.

The President. That subject is still in the hands of the Committee, but it is very certain, sir, if we were to follow our own inclinations, we would look upon your invitation very cordially.

Mr. Hastings. The invitation is very cordial on the part of the city and the State.

The invitation was referred to the Committee.

The President announced that the paper of Dr. Ray was before the Association.

Dr. WALKER. I certainly was very much interested in the paper of Dr. Ray, and I think it adds one more to the many obligations under which this Association lies to the Doctor for the valuable and interesting essays that he has read for our benefit. Taken in connection with the very valuable paper of Dr. Landor on a kindred topic, they amply repay us for our visit to Toronto this year, if nothing else was presented before us. I think the liberal circulation of this through the country would do a great deal towards educating the bar in a proper manner, and in reaching those judges who, filled with the importance of their own office, ignore the opinion of experts, however intelligent they may be. I think no amount of argument can educate their consciences, and it is only by educating the people and the bar, so that it will become impossible for judges to retain their confidence without a proper course is pursued, that will accomplish the object. When that state of things is brought about, we will have different rulings from the judges.

The differences of opinion, to which Dr. Ray referred, I take it, add something more from which to influence inquiries after the truth oftentimes, and sometimes it almost inevitably will come. I take it that some of us who have been called upon to act as experts in the courts, have been mortified and pained at the radical differences of opinion that experts have reached on the same subject with the same means of inquiry, and the same facts spread open before them, on which to base an opinion. I take it, sir, that we ourselves, individual members of an association, have a part to perform in bringing about a reform in this respect; and in my judgment this paper of Dr. Ray, and the train of thought it excites, teach us our duty in two important particulars,—first, that we should never allow ourselves, under any circumstances, to give an opinion upon the question of sanity or insanity without having taken ample time in which to consider the case and form our judgment. I believe many of these radical differences among experts, which have become a reproach to us, have resulted directly from haste, in this manner—that we are called to take up a case twenty-four hours or so before it is taken up in court. When we are asked to form an opinion to meet a case, we are too apt to take first impressions, and once having uttered an opinion, pride of opinion helps to prevent us from taking the back track.

As stated by Dr. Ray, under microscopic investigations, one declares that a spot is one of blood; another goes further and says that it is not human blood—thus perhaps saving a human life. Another takes a physical disease, of the kidneys, for instance; he makes an examination and declares that the man's life is forfeited and that his days are numbered. Another takes the same person and makes a microscopic examination, when he assures the man that his days are not numbered, and that hope lies before him. Thus in the case of mental disease; taking ample time, hurried by nothing, acting as the dignity of the occasion requires us to act, we shall make few mistakes.

Our duty leads us in another way in which we may avoid these mistakes, and that is by carefully considering the importance and bearing of all the facts and incidents that come to our knowledge, and deliberately following them to their legitimate results, whatever they may be. I think if in these two particulars we are careful to do our duty, we shall do much to take away the reproach which now attaches to us for our unfortunate differences of opinion.

Dr. Parsons. The paper of Dr. Ray, like everything from his pen, is so exhaustive that it leaves others very little to say. The perplexities and annoyances to which medical experts in insanity are often subjected when brought into court as witnesses, are well understood by all the members of this Association. Sometimes after a medico-legal case has been made the subject of prolonged and careful study by a competent expert, and the opinion formed has been carefully expressed in court, an adverse decision is rendered in accordance with the opinion of a physician, who knows little of the particular case in question and still less of the subject in general. In such cases we can not help feeling that there are faults in the legal methods that require correction. After all it is a question whether it may not be our duty, as an Association, to express our convictions regarding what seems to us the method best calculated to subserve the ends of truth and justice, without regard to any popular or legal proceedings that may be supposed to lie in the way of the adoption of our views. This procedure would certainly be in accord with the proper functions of a scientific body.

It may be, however, that the difficulties in the way of a change in legal methods are not as great as we suppose; and that a commission of experts or some better and more uniform method of making up and presenting hypothetical cases to medical experts would be readily adopted, if properly submitted to the considera-

tion of legislators and lawyers, as improvements in the present judicial methods of deciding questions of sanity or insanity. In one State, at least, favorable consideration has been given to such changes in methods.

Dr. D. T. Brown. In connection with this subject, which has occupied the attention of the Association during the day, I will say that I have received a letter from a member of the Association, not here present, who has requested me to perform a service for him and to request the opinion of the Association on a subject which interests him very much, in case they give their consent to express an opinion. It is a question of the direct and practical utility of our specialty. It bears the same relation to the general subject upon which our friends, Drs. Ray and Landor, have given such interesting and instructive dissertations, that the case of an actual patient bears to a general treatise or lecture on the disease he illustrates. In fact, it brings such a case to our notice and in it are involved the doubts and difficulties which attend such cases in the courts. Here in our session room we discuss calmly principles and propositions whose chief value is that they become applicable when we are brought as witnesses before a court.

I propose not to mention names in reference to this case, where a party is on trial for homicide. This has occupied the time of one of the district courts of the State of New York during two trials. In both cases the jury have disagreed. The matter comes up for a third trial during the present month. It has already cost the county in which it was brought over ten thousand dollars and has impoverished the family of the prisoner. It has also created much indignation among the tax-payers as well as among the neighbors of the accused and his victims. My correspondent says: "I send you with this note a copy of the hypothetical question, with a copy of the expert's answer which I request you to bring to the attention of the members of the Association. It seems to me that a case like this, in which the facts are very fully developed and portrayed, and yet from which widely-differing conclusions are drawn by different men, becomes one of very great professional interest to us; and I think it would aid us all very materially if we could bring all such cases to the notice of our brethren of the Association, and obtain their verdict upon them."

Dr. Gray. As the case to which the Doctor alludes is familiar to me, and as Dr. Brown and myself have been called as experts, (as well as Dr. Choate, the writer making this request, and he may be called again, and as the case remains before the court unde-

cided,) it seems to me hardly proper that a hypothetical question, which on one side is supposed to embody the facts in the case, and which of course must be taken as subject to one of the criticisms of Dr. Ray, should become a subject of discussion here. (I heard only a part of his paper.) Then we know each lawyer is likely to argue that the facts of his side correspond with his hypothetical question. There were two hypothetical questions given in the case; the experts were not permitted to testify upon the evidence, but were obliged to testify, as Dr. Ray suggested, upon these hypotheses, which were supposed by each side to embody the facts. I hardly think, therefore, it would be proper for the Association to attempt to discuss a question proposed by one of the counsel in a case which is not only *sub judice*, but which comes up for trial within perhaps thirty days from now, and in which some of the gentlemen present may be required to attend and give evidence.

Dr. LANDOR. Did both sides agree upon the proposition?

Dr. GRAY. No, sir, they did not agree. If they had it would have been quite a different thing. It is one of those unfortunate cases where there is a difference of opinion in the minds of the experts.

Dr. BROWN. In reply to Dr. Gray's remarks, I would say that until we came into the room this evening I was not aware that more than one question was submitted to the experts. Dr. Gray informs me that there were two. There were five gentlemen called into this trial who have had large experience among the insane. So far as my knowledge extends, this was the only question submitted to them. There may have been another after I left the court room. I was present at both trials, but did not remain through the whole of the last trial.

Dr. GRAY. Both hypothetical questions were put in the case.

Dr. LANDOR. Does the law of the State require you to give an opinion in a hypothetical case?

Dr. BROWN. The expert may decline to form an opinion. But when he is brought to such a case and deems that he has grounds enough to form an opinion, it seems to be obligatory upon him to reach one and to express it. So far as my own knowledge extends, this question was not controverted by the counsel for the prosecution; although the prosecution attempted to undermine and fritter away the answer of the experts for the defense by deducting one proposition after another from the question, leaving the ground very thin upon which the witness was to stand. If the Associa-

tion should not think it desirable to form or express an opinion upon the question, either collectively or as individual members, it seems to me that it might be of some interest to hear the question read and learn how it is put in the courts of New York.

Dr. NICHOLS. I should like to have the question read. Perhaps it is a matter of public importance, but I really do not know to what case allusion is made.

Dr. BROWN. It does not seem necessary to indicate the case more pointedly.

Dr. NICHOLS. No. I do not know what the opinions were, nor what they are.

Dr. GRAY. The opinions have been given by Dr. Brown and myself, as well as by others. I have been supœnaed again, and I suppose Dr. Brown will be. For that reason I thought it was hardly proper to bring such a question before the Association. Whether this hypothetical question embraced all the facts was disputed by the counsel, and was part of the ground of argument before the jury. The judge in charging the jury stated distinctly that they were to take the two hypothetical questions and they were to take into consideration first, whether or not the two hypothetical questions presented, really embraced the evidence. It was apparent that the two, which differed materially in setting forth some of the facts, could not both be correct, and it was a question for the jury to decide whether they were or not. I think in that view of this case, that it is not proper or advisable to bring the matter before this body, and involve the Association in such a question.

Dr. NICHOLS. I suppose, Dr. Gray, you have no objection to the hypothetical case being read.

Dr. GRAY. I have no objection; but I am giving my opinion as to the propriety of discussing this matter as the issue now stands. If the whole question involved or at issue should be brought before the members there could be no possible objection after judgment had been rendered by a court and jury.

Dr. LANDOR. It is something novel to me, that a man's life or death may depend upon a hypothetical question. I am anxious to know how a hypothetical case can be so presented as to definitely embody the facts in the case. If Dr. Gray thinks it likely to defeat the ends of justice, of course it is best not to present the matter.

DR. GRAY. This is a hypothesis of counsel or statement of the case by the counsel for the defense.

Dr. LANDOR. The result is just the same.

Dr. GRAY. I can not see the propriety of the Association discussing a question that remains in the position that this is in now, with members of this Association standing directly opposed to each other, and before a court and jury have acted on it.

Dr. BANCROFT. My curiosity begins to be excited to hear the case. In regard to the suggestion made by Dr. Landor, if I understand it, the hypothetical case as prepared in our courts is simply a matter of convenience. There is a technical objection to witnesses giving an opinion on the facts, thus becoming jurors, and the hypothetical case on which the opinion is given, obviates the difficulty. Nominally it is another case: really it is the case on trial, and embraces all and only its facts. I hope we shall leave this question on the hypothetical case.

Dr. RAY. As a matter of curiosity, I should have no objection to hearing the hypothetical case, but if there are two, we ought to have both.

Dr. BROWN. I am representing another here, and as there is a difference of opinion about propriety, I should decline to go on without some expression of opinion by the Association.

Dr. WALKER. Inasmuch as a member of the Association has sent this question here to be laid before us, I certainly hope that Dr. Brown will proceed to read it. It does not follow that we shall decide upon it. I feel exceedingly interested, like Dr. Bancroft, and if we can not get both sides, let us have one.

Dr. KIRKBRIDE. I think the discussion should not be had upon it under the circumstances. I agree with Dr. Gray.

Dr. COMPTON. I move that the Doctor be requested to read the hypothetical question, but that there be no discussion.

The motion to read the case was agreed to.

Dr. BROWN. I would merely add before commencing to read this, that this was a question presented in a court in New York, in the case of a man who killed two persons and wounded another seriously; one of the persons killed being his wife, and another an old man who had been a friend of his for years. He belonged to a respectable family, but he was an idler; not an intemperate man nor a vagabond, but an idler who managed to live upon the moderate competency provided by his wife's father. The question presented is of this character; it embraces the views taken by the counsel for the prisoner, and, so far as I know, not objected to by the other party.

(The hypothetical case was then read.)

Dr. EVERTS. Suppose that it is not claimed that the accused is insane at the time of the trial, but that he was insane at the time when the criminal act was committed. We are then compelled to pass upon a hypothetical case, and give an opinion based upon the testimony of witnesses. Any person examining the accused at the time of the trial might be satisfied of his sanity at that particular time, but could not by such personal examination pronounce positively that the accused was not insane at some previous time. A large proportion of those cases in which the plea of insanity is instituted as a defense, so far as my observation extends, are of this character.

Dr. GUNDRY. Not long ago I was a witness at a court where a hypothetical case, almost as large as that read by Dr. Brown, was presented in three different forms, on which opinions were requested; of course the opinions were diametrically opposed to each other upon two hypotheses. We are not responsible for that, but for the opinions given upon the facts stated. I was not in the court, and had no means of knowing how far the hypotheses were drawn in either direction. We gave an opinion as counsel does upon a statement of the facts. Under the rulings of the Court, you have to answer hypothetical questions. You have not to assume that they were proven; but if they were, would your opinion be thus and so. There is a limit to all human responsibility. I will admit, as set forth by Drs. Landor and Ray in their papers, that the practice grown up is a dangerous one; but we are not responsible for it; all we can do is to give our opinions on the facts presented to us, and it is for jury and judge to decide whether the facts given are proven, afterwards. As I said, I gave an opinion on three distinct statements. Of course the jury had to take three opinions and compare them with the state of facts to see which was proven. I take it we are not responsible for the rulings of the court under the absurd practice that springs up, but we are responsible for that which is given to us.

Dr. NICHOLS. I would ask if, in the experience of any gentleman present, the Judge has ever corrected the hypothetical case put by the counsel? I took the liberty of suggesting to one of the Judges of our District Court on one occasion, when informed that a hypothetical case would be put to me, that he should require the counsel to put what was in his (the judge's) judgment such a case as embraced all the facts, or at least all the testimony. He said he

thought that was proper for him to do, and he did it. The counsel on each side of the question put a separate hypothetical case, each expressing it in his own language; but the Judge struck out a part of each, and requested each to add something before he would permit me to answer. It seems to me that that is in the proper province of the Court, and that such a course is really the only one by which the opinion of experts, founded on the testimony of witnesses before the jury, can be made to conduce to the ends of justice.

Dr. BROWN. In the experience of gentlemen, has it been customary where they had cases, for the counsel on both sides to present a hypothetical case to the expert?

Dr. WALKER. In Massachusetts, it has been the custom that the counsel on each side has presented his hypothetical case to the expert, and he has been required to give his opinion on the two hypotheses. Within a year, the Chief Justice has given me liberty to take the facts testified in the Court, assuming them to be true, —for in such a case either the jury, or the one called in, must be the expert. He then allowed me to give the case before the Court.

Dr. KIRKBRIDE. You were present and heard the testimony?

Dr. WALKER. I was present and heard the testimony all through. In New Hampshire, it has happened to Dr. Tyler and Dr. Bancroft, and to Dr. Bancroft and myself, to be called upon to draw up hypothetical cases from the testimony.

Dr. LANDOR. I should like to hear the opinion of Dr. Ray upon the propriety of giving hypothetical cases at all.

Dr. RAY. It is false philosophy as well as false medicine to ground an opinion upon an hypothesis. It is a principle of philosophy not to express an opinion upon a certain state of facts, unless you are sure of the facts, and these must be ascertained first. It would be entirely a work of supererogation for a naturalist to puzzle out the nature of an animal, the description of which had been given him by another, and which might be, or might not be true. He would say, "Give us the creature himself; some things may be as you represent, some not; you may have omitted some very important particulars." So in other sciences, in law for instance. A lawyer would be very careful indeed about expressing an opinion upon a hypothetical case. He would decline altogether except as a matter of curiosity, unless he was assured that the alleged facts were exactly correct and not in conflict with other facts. You may remember the case of Capt. White, who was killed in Salem, by Crowninshield. It was said that the question

was put to a celebrated lawyer, "If that man dies what will be the descent of his property? Will it go here or there?" The inquirer got an answer to suit himself; but the answer did not turn out to suit his case because he did not state all the facts. You must either utterly decline giving an opinion upon a hypothetical case, and thus debar parties from the benefit of your knowledge, and subject them to trouble, or you must do the best thing you can. I have come to the conclusion that the latter branch of the alternative is the one we are bound to take, and my practice has always been to say to the parties, "the case as stated leads me to this or that opinion; if there are facts left out, and those facts can be presented in some other shape, they might possibly change my opinion." Having done that I think the expert has done his duty—not so accurately, and thoroughly and satisfactorily to himself as he would wish, but under the circumstances he has done the best thing he could.

Let me advert to the remark made by Dr. Walker, in regard to discrepancies in medical testimony. The Doctor observed I think about the effect of incautious and hasty expressions of opinion; I have reason to believe that mischief sometimes arises from that cause. A man once having expressed his opinion might be prevented from retracting it on receiving further evidence in the case, from the lack of a little moral courage to acknowledge a mistake, and this should impress upon us the necessity (and I make the remark for the benefit of the younger members of the specialty, who have got this phase of it to go through) of being exceedingly cautious how we encourage parties in the belief that we are on their side on the strength merely of their *ex-parte* statements, because in consulting experts they are very liable to leave out the facts unfavorable to their own side; and it will always be well for the expert to let the counsel understand that his opinion is founded only upon the facts presented, and that if additional facts are brought out, it may alter his opinion.

Dr. Bancroft. I am much impressed with the force of the remarks of Dr. Ray. I think he has hit the nail fairly on the head, and I believe that the only true course is that pointed out,—that medical men engaged in this specialty, or those liable to act as experts can do much to remedy this feeling referred to, by planting themselves on the right principle from the outset,—by being cautious and chary—instead of anxious and ready to give testimony, giving it only when necessary, and after ample time is given to make the examination. I think it is a good principle to say that from

the start we will never give anything but honest and unbiased testimony. You may say of course one should not, but a thousand influences are brought to bear upon experts, and a pressure in any case of great public interest sufficient, I think, to show that there is good reason, (human nature as it is,) for planting ourselves firmly upon this principle. I do not think I do the medical profession, or experts, any injustice by admitting this in this way; for I think we can all recollect trials in court for crimes, in which the most respectable testimony has been called on both sides; where the most distinguished experts have given opinions on subjects as nearly susceptible of demonstration as any branch of science, and yet differing diametrically with each other.

A case of poisoning occurs to my mind in which professed experts in chemistry, upon being called and analyzing the fluids from the stomach, gave their testimony diametrically opposite. There is some reason why this should be so, and I can not help suspecting that good men allow themselves to be influenced by considerations that bear upon them outside the facts in the case; and if it is true in chemistry, it is as likely to be true in questions of this more difficult class; hence, I believe it is not acknowledging our liability to weakness any more than we ought to do, to say that we need to be strictly honest with ourselves, forever refuse to have anything to do with a case unless we can have a fair chance to examine it, and give the simple unqualified results of such examination,—whether it is in favor of the party applying to us, or in opposition to that party.

I think if we exert ourselves in courts of justice to our utmost to carry out this principle strictly, we shall do much to redeem expert evidence, I think, more than anything else, or all other things put together.

Dr. Everts. Do you mean the examination of the person supposed to be insane?

Dr. Bancroft. We can not always do that, but we ought to aim to get and give the facts whether it involves the person or not.

Dr. Lewis. The Doctor has asked us in regard to hypothetical cases. I have been unfortunate enough to be called upon to give testimony in two cases,—one of homicide, and the other a case in which each of the parties had a hypothetical question to ask. I refused to answer on both occasions, the lawyers in both cases threatened me to the extent of the law, and called upon the Judge in order to make me answer a hypothetical question. I again refused and the Judge bore me out in my position,—he left me, to answer the questions if I chose, and if not I need not do so.

Dr. EVERTS. In all cases when I have been called upon as an expert, not very numerous, both parties have presented hypothetical questions; and in only one instance have I known the court to interfere. In that instance the Judge put a case of his own construction, and it seemed to embody the facts of the testimony more fully than that of either of the parties to the trial. The counsel for the defense presented his hypothesis, then the prosecution presented theirs and then the Judge presented his.

Dr. GUNDRY. After all, much as we may declaim about discrepancies, there are other causes which help to disgrace the profession. When we examine the case, there is not so much blame attached to our discrepancies. A certain amount of self-deception seems to come in. Gentlemen testify to their imaginary large experience, but when sifted down it is a different matter from large experience although to them it might appear so. These are things which, after all, stated on the stand, bring us into disrepute. We give certain testimony on the condition of the brain with no person to verify or dispute. There are honest discrepancies of opinion and there probably will be, so long as the world remains; and where there are discrepancies between witnesses upon the stand, it will of course follow that there will be discrepancies in the minds of experts themselves. It is not altogether the effect of discrepancies before the jury or the court, but it is sometimes the assumption of the speaker. The facts are not in such a light as to correct each other, and thus you have no simple mode of investigation, and in a large majority of the cases when asked in relation thereto, we can not altogether satisfactorily account for them; but after all we should all try to do the best we can, as Dr. Bancroft said. Discrepancies will come from an honesty of purpose, but when we assume too much, it of course comes back in some way upon ourselves.

Dr. GRAY. I would not desire to be recorded as assenting to the idea that men can always agree in opinion, and that we, as a body of experts, must bring ourselves to that position where we are able to form precisely the same opinion upon the same given set of facts, when those facts are largely mere interpretations of phenomena. If we are to come to that, then all that is to be done in any case is to select some particular man out of the body of experts, and let him give an opinion. Now we know that medical men constantly differ in the examination of cases. A medical man will call his friend in consultation whom he deems equally expert with himself, and may think him better in diagnosis, and yet they

may differ, and differ with entire honesty and entire justice to their profession, as Dr. Gundry suggests. I never expect that we shall arrive at the period when we will all be able to blow through a single quill. Any one who has attended criminal trials will have observed on the lawyer's table, law books and books on medical jurisprudence. Opposing counsel out of the law books will get decisions of courts which are adverse, purporting at the same time to be based upon precisely the same principles of law and applying to the same character of facts; they will turn also to works on medical jurisprudence, and array the authors directly against each other, and these men of equal eminence; and I suppose that will always be so and that there will be these differences, and properly too.

As to the matter alluded to by Dr. Gundry, I take it that trickery is not confined to experts. The practice of introducing instruments in courts in order to impress the jury or make a show of superior wisdom, is not common or likely to be. The use of instruments to aid in diagnosis can not be condemned or neglected, because some may profess to see more than can be seen, or bring them into court improperly. I do not suppose, however, that Dr. Gundry intends to exclude the use of any physical aids to diagnosis now used, or which may be hereafter invented which will be likely to throw any light on any question of medical science, whether in practice or before courts. I think I appreciate his allusions, and I with him equally condemn the array of instruments for effect and the pretense of experience which medical experts have been guilty of in reciting as cases in their experience, persons whom they have casually seen in walking through hospitals.

The PRESIDENT. The Association has postponed the consideratian of three important papers. We have accepted an invitation for to-morrow afternoon. It would seem that the work is crowding upon us pretty sharply, and it will therefore be necessary to commence the meeting to-morrow promptly at the time fixed upon.

Dr. PARSONS. Mr. President, there is a certain matter to which I desire for a moment to call the attention of the Association. A few weeks since I had the honor of reading a paper before the Medico-Legal Society, of the city of New York, regarding the methods of examining persons supposed to be insane and of committing them to asylums for care and treatment. Certain statements mentioned in this paper have, as I understand, been reported in various periodicals in such a manner as to prove a source of annoyance to some members of this Association. This result has, I

am persuaded, been due to the disconnected manner in which the reports were made rather than to anything really objectionable in the subject-matter. At the suggestion of Dr. Ray, I take the liberty of asking leave to state what the subject-matter of the paper was. If the explanatory statement should not prove satisfactory an opportunity will then be afforded for members of the Association to make such remarks and criticisms as they may think proper.

On motion of Dr. Brown, Dr. Parsons was requested to make such remarks upon the subject as be desired.

Dr. Parsons. I suggested to Dr. Ray, that perhaps I had better read the whole paper in order that all the statements might be placed before the Association in their proper relation. Dr. Ray thought, however, that a simple verbal statement would be sufficient, and this I will endeavor to make as clearly and concisely as possible.

The facts mentioned were as follows: Many of the patients received at the New York City Lunatic Asylum, are unaccompanied by friends, no history of their previous physical and mental condition is placed at our disposal, while they are oftentimes unable to give any reliable account of themselves. Some of these patients present no symptoms of insanity at the time of admission, nor yet during their residence at the asylum, although they are sometimes kept under close observation for a period of two or three months before they are discharged as *improper subjects.* Hence those patients who are found to be insane, may not at first receive as judicious treatment as they would receive if their histories were known to the attending physician. Those who are not found to be insane may yet be proper subjects for asylum treatment; they may have a *lucid interval* from the date of their admission to the date of their discharge. If really *not insane* the period of their detention might be greatly diminished, if all the facts in the case were within the knowledge of the asylum physicians, who are expected to be better skilled in the diagnosis of obscure mental states than are the majority of practicing physicians. It was stated that since the year 1848, no less than one hundred and twenty-five persons admitted as patients to the New York City Lunatic Asylum, have been discharged as *improper subjects;* also that during a single year no less than forty persons had been in like manner reported discharged as improper subjects, or as not insane, from American asylums for the insane.

Dr. KIRKBRIDE. Last year?

Dr. PARSONS. Not last year, but during a single year. Some remarks were made on the methods of conducting the investigation in a case of supposed insanity, and on certain sources of error to be avoided; while the annoyances and disabilities to which a mistaken diagnosis may subject both patient and physicians, were urged as reasons for the exercise of great care and deliberation before deciding on a difficult or doubtful case. The importance of carefully written statements of the evidences on which a diganosis is founded was also strongly urged, and for two reasons; first, as an aid to the examining physicians in arriving at a correct understanding of the case; and secondly, to the end that a copy of these statements may be forwarded with the patient to the asylum to which he is committed, in order that the asylum physician may have an early, authoritative and reliable history of the case he is about to treat. It was further recommended that the written statements of the examining physicians be separate; that they include a history of both physical and mental conditions, and furthermore, that the facts founded on their own personal knowledge and observation, be carefully separated and distinguished from those gained on the testimony of others.

This explanation will, I think, suffice to indicate the matter, purport and objects of the paper in a general way.

Dr. KIRKBRIDE. I feel bound to express my satisfaction that Dr. Parsons, has thus introduced this subject, because the report of the lecture in the newspapers set forth that such institutions as that of Dr. Parsons, were used for the very purpose for which the libellers of them have been declaring to be the case for the last few years. It was stated, if I am not mistaken, that more than one hundred cases had been received into one institution who were not insane, and that in a single year nearly fifty other sane people had been received into other hospitals. That was a most startling statement, one I could not possibly credit, because in my own experience, in a period extending over more than thirty years, and with more than five thousand patients, I had never known a sane person to be restrained of his or her liberty, as being insane, and I have never known an instance where an attempt was made to place a sane person in such a position. Under these circumstances, I could not but be startled at such a report of the lecture.

Dr. COOK. Were not some of these cases reported improperly?

Dr. PARSONS. I referred to improper subjects, or those I did not consider insane.

Dr. Cook. I will state that patients have been received from inebriety, and not as insane patients.

Dr. Kirkbride. In my report I made that exception expressly. I did not make any allusion to inebriates, but to people being sent and admitted as insane who were really sane.

Dr. Cook. The number the Doctor referred to might cover that class of cases.

Dr. Parsons. Some of the patients discharged from the New York City Lunatic Asylum, as improper subjects were cases of intoxication, of the delirium of fever, &c. In some of the cases discharged as improper subjects the mental powers were certainly in abeyance at the time of admission. In others, however, the mental powers seemed to be in their normal condition, from the date of admission to the date of discharge. What the condition of those who present no evidence whatever of mental disturbance, may have been when the affidavit was made, we oftentimes have no means of knowing.

Dr. Gray. You do not intend to convey the idea that the physicians were influenced by other considerations?

Dr. Parsons. Not at all. The idea intended to be conveyed was that members of the medical profession have hitherto received little instruction on the subject of insanity, and hence were liable to make mistakes in diagnosis. Suggestions were made and methods pointed out which if heeded, were thought likely to di minish the number of mistakes in the diagnosis of insanity.

Dr. Ray. On what grounds had they been placed in the institution? On what grounds had you come to that conclusion? Is there a book of cases kept there?

Dr. Parsons. They had been placed in the institution as in sane. I came to the conclusion that they were not insane, from a personal knowledge of some of the cases and from the records of the institution. A book of cases has been kept since 1859.

Dr. Ray. I took it that they were not all under your care.

Dr. Parsons. They were not.

Dr. Ray. Then you merely formed your cases from the case book?

Dr. Parsons. The number of cases of improper subjects, was taken from the Annual Reports of the Resident Physician. Of some of these cases we have a written history, and of others we have not. Some of them were within my personal knowledge and others were not.

Dr. RAY. You stated that there were certain cases admitted as insane, who were not at any time insane?

Dr. PARSONS. I so stated.

Dr. RAY. I would ask whether any such cases occurred before you went there?

Dr. PARSONS. Certainly.

Dr. RAY. How did you come to find that these were cases of that kind?

Dr. PARSONS. By consulting the records of the institution.

Dr. RAY. That does not exactly meet the case; and whether it does or not the asylum seems to have been under the charge of other men; and it is a matter merely of opinion when you say whether they were correct or not. They might have been incorrect. I do not see how you can vouch for any other man's opinion.

Dr. PARSONS. No attempt was made to vouch for the opinion of another. I found that other men, as well as myself, had recorded a certain opinion regarding certain cases, and simply stated that fact.

Dr. Ray. You find them admitted as not insane, and discharged as not insane?

Dr. PARSONS. I find these cases recorded as not insane or as improper subjects.

Dr. BROWN. I was there at one time. I found among some of the old "remarks," patients discharged on certain days with the item "not insane," instead of the remark recovered, improved, or not improved.

Dr. RAY. He makes this distinction,—some of these cases were "not proper subjects for the hospital." I want to know how he gets at the distinction.

Dr. BROWN. As I remember the records of the hospital formerly, it would appear that he was "not insane when admitted."

Dr. PARSONS. By "not insane" or "improper subject," it was intended to convey the idea that the cases referred to were not insane at the time of admission.

Dr. RAY. How do you get at that?

Dr. PARSONS. In this way. Some persons have been placed under my care on a formal commitment as insane, who to the best of my judgment and belief were not insane at the time of their admission, nor yet during a sufficiently prolonged residence at the asylum. The late Dr. M. H. Ranney received similar cases and judged of them in like manner when I served under him as assistant physician. These last cases were also within my own personal

knowledge. It seems fair to infer that all other cases reported by by Dr. Ranney as improper subjects were of a similar character. The cases reported by Dr. Ranney, and by myself as improper subjects, comprise the whole of the one hundred and twenty-five cases enumerated.

When superintendents of other asylums report some of their discharges under the head of not insane or improper subjects, it also seems fair to infer that they attach a similar meaning to the terms. It is difficult to conceive what else can be meant. In stating, however, that other superintendents report a certain number of their discharges under the head of not insane, I certainly would not be understood as vouching for the correctness of their opinion. They may have been mistaken. All the facts necessary to the forming of a correct opinion may not have been at their disposal. Some of the cases I myself have discharged as improper subjects, may have been insane at the time when the commitments were made out. They may, perhaps, have had a lucid interval during their residence at the asylum, or they may have had the power of concealing their delusions while under asylum treatment and supervision, especially from persons not advised of the nature of their delusions. It can not be claimed that even the most learned experts always arrive at a correct conclusion; much less can this claim be made of these whose opportunities for study and observation have been limited. For this reason, certain forms and methods were reccommended in the paper in question, as aids, both to general practitioners of medicine, and to superintendents of asylums. If I have misunderstood the import of the expressions not insane and improper subjects as employed by other superintendents of asylums, they have the opportunity of explaining what they do mean by these terms.

Dr. Shew. I can readily understand how my friend has been misled in not having all the facts before him at the time; for instance, in our report, we have given so many as having recovered, so many as having been discharged improved, and four as not insane. If the Doctor could have referred to the annual report he would have found, in the first year's history, that there were two cases reported, not only in the tables, but also in the explanatory remarks as not insane, and that one of these was an idiot boy—congenital idiocy; and the other, the case of an old man supposed to have been insane at the time of commitment, and perhaps the friends were justified in taking the best measures for his care and treatment, although we decided, after having him under treatment

for three months, that he was not insane. Another case was that of a boy sent to us for observation by the police court. We had him under care for several months and decided that he was not insane. These are cases given from year to year. In carrying them on, one might be misled by not having seen the explanations in the back reports. I remember that during the year I was connected with the Insane Department of the Philadelphia Almshouse, it frequently occurred that several patients were admitted in a day, and it often happened that the superintendent or assistant physician would see them for the first time, sitting in the building. This place also contained medical, surgical, obstetrical and venereal wards. Hence, persons were often admitted to the insane department, without inspection at the time by the medical officers, and perhaps were not seen before all the entries respecting age, birth &c., had been made in the proper books. It often occurred that simple cases of drunkenness were sent to the insane department, by mistake, when they should have gone to the ward for inebriates. They were of course entered upon the books, and afterwards sent to that department, but our records would account for them as being not insane. We tried to correct these errors, but I believe up to the present time, they have succeeded only in part. I presume there are still cases on record there of persons who were committed through mistake. I should hardly be prepared to believe that in any one year all the institutions together could show forty or even half that number, who were sent there with the belief that they were not insane. I do not think it possible, after excluding all errors such as I have named.

Dr. Bancroft. There is danger of producing an impression unfavorable to the interests of the insane by such entries which should be avoided. In one of our reports a case is entered not insane. This patient had once recovered from insanity in the asylum, but, now with phthisis but not insane, desired to be admitted for general care, and was received and entered in the tables as not insane. The case was explained in the body of the report.

Dr. Ray. The statements having been made, it strikes me as not best to leave the matter as it is. They have been publicly made and produced an impression. If there has been any mistake in the matter is it not best to have the mistake rectified? Is it not best for Dr. Parsons to give us a full account of the cases not insane with the dates and facts so that we may know exactly what he means?

Dr. PARSONS. I will be perfectly satisfied to publish the whole paper, but as to publishing the cases the Doctor speaks of, that is not, I think, advisable. The cases are given in the paper.

Dr. RAY. Did you give the cases with day and date?

Dr. PARSONS. I think the matter was sufficiently expressed in the paper.

Dr. RAY. I understood your motive in giving these cases was to promote higher attainments among physicians on the subject of insanity.

Dr. PARSONS. Yes sir.

Dr. RAY. Then let me ask how this statement can promote the alleged purpose?

Dr. PARSONS. That was not what I meant. I did not mean that it was reported that cases sent to us under delirium and typhus fever were not sent through proper motives.

Dr. Gundry moved to adjourn to meet to-morrow morning in the Parliament buildings.

Dr. Ray moved to amend, that the question be submitted to the Committee on Business, to take such action as they deem best.

Dr. Kirkbride moved to amend the amendment, that the Association adjourn to meet in this room at 9 A. M. to-morrow, to proceed with whatever business the Committee on Business brings up.

Dr. Landor stated that the Committee on Business had arranged to have the Association meet to-morrow morning where they had met thus far, and then go to the Parliament building.

The amendment of Dr. Kirkbride was modified so as to read that the Association adjourn to meet in this room to-morrow morning at 9 A. M., and then agreed to.

The minutes of the meetings of the day were then read and approved, and the Association adjourned.

WEDNESDAY, June 7, 1871.

The Assocation was called to order at 9 1-2 A. M. by the President.

Dr. Parsons, from the Committee to audit the Treasurer's account, reported that the Committee would recommend an assessment on each member of five dollars, to defray the expenses of the Association.

The report was adopted.

Dr. Curwen, from the Committee on Business, reported that it would be more pleasant to meet in the room in the Parliament building, the use of which had been kindly tendered to the Association; but if the Association went there it must adjourn at half past twelve o'clock, in order to be at the Lieut. Governor's house at half past one o'clock, as had been agreed upon.

Dr. Kirkbride inquired whether the Association would not lose an hour by going to another room.

Dr. Ray moved that the Association stay where it is for the present, which was agreed to.

The President announced that the first thing in order was the consideration of the resolutions of Dr. Kirkbride.

Dr. RAY. Mr. President, I feel very much as Mr. Webster did on one occasion when called upon, as he said, to reäffirm an ordinance of nature. The opinions of the Association on certain points have been so well fixed for many years that I supposed they would never be altered, that they were correct from the very nature of things. I am not clear now about the necessity of bringing up again the subject-matter of these resolutions. It does seem to me like reäffirming the laws of nature.

The questions implied in these resolutions, you are aware, have come up at various times before the Association, and have been very thoroughly discussed. It seems to me we have discussed them until they are threadbare. For this reason I do not feel like speaking upon them at present.

Dr. Cook. I do not rise to discuss these resolutions. The first, third and fourth, you all know, receive my hearty approval. The opinion of the Association has been pronounced, and I can see no necessity for prolonging debate. I could not go upon the record as endorsing the second resolution without reserve or qualification, and I wish to be excused from voting upon it. I simply desire to do this without throwing in anything for discussion. I am willing to take a vote upon the resolutions without discussion.

The President. Is it the wish of the Association that we discuss this, or put it to a vote? The Chair agrees that we have no time to spare, therefore instead of going round to all the members in turn, I will call upon any gentleman who may wish to discuss the question.

Mr. Hastings. One single thought strikes my mind in relation to that second resolution. I have no doubt but that the ground taken is correct. It is a matter that I have never particularly considered. I have taken it for granted that the members of this Association have thoroughly considered it, and I have been willing to adopt their views as my own. But this thought I wish to throw out,—whether the legislation of the country is not tending in an opposite direction; and in case that legislation should prevail in opposition to the views of the Association, whether it would not place the Association in an awkward position. If their views are correct, should they not have force enough to stamp them upon the legislation of the country? If legislation should go in opposition to their views, does it not show that we have not force enough to cause it to go in accordance with them? I know the question of establishing institutions for the chronic insane is extensively agitated. I understand there is an institution of the kind in New York.

Dr. Kirkbride. One of the objects aimed at heretofore, has been to meet exactly that question. It seemed that there was a tendency among non-professional men, and a few in the profession, to establish institutions for incurables. It was to meet that question and to show that the views of this Association were positive against such a course, that these resolutions were introduced. I do not believe we can ever make a mistake in doing what is right. I believe that the establishment of such institutions for the incurable alone would be one of the greatest misfortunes that could happen to the insane. I am anxious to record my vote, and have my friends record their votes against the establishment of hospitals, exclusively for this class of insane. Some gentlemen who are just

as honest in their convictions as I am, will vote against this resolution undoubtedly, but I would like to have our votes recorded here in regard to this important question.

Dr. Roy. This question is so interesting and of so great importance that I can not allow it to pass without saying a few words. I am very thankful to Dr. Kirkbride, for bringing these resolutions before the Association, as the subject is one of great actuality for the Province of Quebec.

Some twenty-five years ago insane, especially idiots and imbeciles, were lodged in separate institutions from acute cases. This, however, proved to be a complete failure and they were placed in asylums. A year or two ago, some members of the Board of Inspectors for Asylums, in the Province of Quebec, actuated by motives of economy, put forward the idea that it would be advisable to keep chronic cases in separate institutions, being under the impression they could be kept at lower cost.

This new proposition was argued and strongly opposed by us, and we brought in favor of our argument the opinion expressed on the treatment of incurables by the learned mover, Dr. Kirkbride, in his Annual Report of 1866.

Incurables require the same care and medical treatment in physical disease as acute cases, and are much benefitted in their moral condition, by being placed under the care of physicians who devote themselves to the treatment of insanity as a speciality.

I would feel obliged to the members of the Association, for the adoption of this resolution, as it would settle forever this important question.

The members of our legislature, I am sure, would not assume the great responsibility of coming in contradiction with an opinion expressed by the American Association, and would not like to depart from the resolution adopted to-day.

It is the duty of the members of this society to advise and guide public men on these matters, and not Parliament to guide this society on medical subjects, for we must bear in mind that this same society ought to know and knows what is best for the safekeeping of the insane.

Dr. Gundry. I suppose we are all agreed as to the first, third and fourth resolutions. I suppose that no difference of opinion has ever prevailed on the principles underlying these. It is only upon the second resolution that there has been any difference of opinion. I do not think we need discuss that matter at this late day. We have been over and over the subject, and it is not necessary to

fight these battles over and over again. Gentlemen who advocate institutions for the chronic insane may have adopted that view from motives of expediency, and not as the best mode. I think we can come to an agreement upon that, that if possible all should be brought into the same category and placed under the same general influences.

Dr. Cook. On the principle, I do not think there is any difference of opinion. I should certainly say that if all the insane were in hospitals, no chronic insane should be taken out and placed in separate institutions.

While the spirit of the third resolution, I think, is a very proper one, the question of economy should be fairly considered, and the expenditure should not be extravagant. But it does seem to me that certain contingencies might arise, or questions of expediency might come in, where the second resolution would stand in the way and I would not like to record my vote affirmatively upon it. I do believe that the most economical way of taking care of the insane is to provide for all. Do not send away the chronic insane to county houses; upon that question I have no difference of opinion. As the country grows older, I think this result will be reached; that in institutions retaining chronic cases, you will have a very small proportion of recent cases and that that principle should be established.

Dr. Bancroft. I wish to ask a question. Supposing that there are chronic insane in poorhouses who we believe should be in regular asylums. Suppose that under existing circumstances the best that can be effected is an intermediate step. Suppose we can do no better, and the choice comes between a modified hospital and almshouses,—what is to be our duty? Suppose a member should favor this modified institution, under the circumstances, does that member act inconsistently with his position as voting for this resolution? That is the question.

Dr. Kirkbride. Do the best you can, but enunciate the principles which you would prefer. Lay these principles before the legislature, and if they will not do what is right, you are released from all responsibility; then do the best you can.

A verbal alteration has been made in the third resolution,—that these institutions provided at the public cost, should always be of a plain but substantial character; and while characterized by good taste, and furnished with everything essential to the health, safety, comfort and successful treatment of the patient, should avoid all extravagant embellishment.

In the fourth resolution "British America," has been substituted for political communities, as suggested by Dr. Nichols.

Dr. CLOPTON. With my limited experience I do not feel justified in speaking with confidence in regard to these matters. I look upon this second resolution as the enunciation of a general principle, and as expressing our preference on the subject; I therefore wish to be recorded as decidedly in favor of the resolution as it stands.

Dr. WALKER. But for the recollection of the earnest and rather heated discussion which took place on similar resolutions in Washington and Philadelphia a few years ago, I would not say a word at this time. At that time I was in the minority on certain propositions with regard to the care of the chronic insane. I desire to say, however, that the wording of the second resolution is so admirable, that I do not see any difficulty in giving an affirmative vote upon it.

"That neither humanity, economy or expediency, can make it *desirable* that the care of the recent and chronic insane should be in separate institutions."

I shall certainly vote for that with all my heart. It can not make it *desirable*, although circumstances may make it *imperative* to do worse. I hope this resolution will receive the unamimous approval of the Association.

Dr GRAY. I suggest that we have the ayes and noes.

The yeas and nays were called as follows:

Yeas: Drs. Butler, Ray, Kirkbride, McDill, Shew, Walker, Hughes, Parsons, Landor, Reidle, Compton, Gundry, Clopton, Grissom, Lewis, Bancroft, Curwen, Evarts, Dickson, Roy, Gray, and Read.

Nays: None.

Dr. KIRKBRIDE. I move that members not now present have the liberty of recording their votes upon that resolution.

The motion was seconded and agreed to.

Dr. H. B. Wilbur then read a paper on the "Moral Causes of Insanity."

After the reading of the paper, Dr. Kirkbride said: I would ask, as this seems to be a pretty thorough bill of indictment against one of the brethren, whether it would not be better to have the defendant present before the trial proceeds?

Dr. WILBUR. I had Dr. Gray's permission to review his paper. When I began the reading he was not present, but my friend Dr. Brown went out for him.

Dr. KIRKBRIDE. If the Doctor was not present, even to hear the bill of indictment, he should at least be present at the trial.

Dr. WALKER. I do not think it is a bill of indictment. Besides, the Doctor was here to attend the meetings of the Association, and ought to be present. I think we are going too far to wait for individuals to come in. If we are going on with it at all, let us argue it now. I move that the Association proceed to discuss the paper.

Dr. COMPTON. He is acting for yourself, on a committee playing the gallant. He is in very good business, and I think we ought to put off the discussion until this evening.

Dr. KIRKBRIDE. Two bad precedents have already been set. Both Dr. Jarvis's paper and my resolutions were postponed, and I now move to add this other to the list of postponements.

Dr. CURWEN. Two wrongs never make a right.

Dr. KIRKBRIDE. No, but three will probably not be much farther from it.

On proceeding to the discussion of the paper, the majority decided in favor of proceeding at once to the discussion.

Dr. GUNDRY. I do not like to open this discussion. I will only say this without entering into discussion: I have always taken the position that insanity is the result, in all cases, of some physical lesion, although our means of investigation may not always enable us to find out exactly where the lesion may be—that there are many roads producing disease of the brain, and that some of these roads must be traveled and the result reached before we have what is called unsoundness of mind. These are the views I have taken.

There are other facts; the relative power or force, or whatever term you may use, (and it is exceedingly difficult to use terms in these discussions,) the relative value of the two parts, the material and immaterial portions; the facts of the preponderance of the one or the other may assist the possessor of the delusion; as, for instance, a strong, well-built physique sometimes preserves a weak mind from becoming deteriorated, or suffering further deterioration; while, on the other hand, instances

are almost innumerable of the relative strong powers of the mind preserving it from the attacks which came upon it through the body. I think it takes a peculiarly strong mind to protect itself from the encroachments the body is constantly making upon it. I believe, with Dr. Ray, the fact of the most illustrious men suffering from insanity recovering so rapidly, and, in what might be added, the eccentricity in great men which in no other persons would have led to insanity.

In reference to Dr. Wilbur, I do not see that he has changed any one of the channels of belief I have heretofore entertained. I do not see that it necessarily follows that producing a change in the mind would impair its efficiency. I do not see that it follows that we must necessarily hold that the mind is a simple emanation, and that you can not have a change in one or the other without the coöperation of both, that one will assist in repelling its own weak side; and if we are concerned in mental disease alone, that you will not have disease of the mind, using that term in its ordinary acceptation, without having prior to it some disease of the body.

Everybody knows how mental emotions subdue the pains and penalties of physical disease; everybody knows in life how a strong, vigorous mind will keep down the encroachments of ill-health; how of two persons equally diseased in the lungs, one goes steadily down to the grave, while the other fights it out step by step and prolongs the disease for years, through a long and useful life, yet it does not fail to produce the effect in the end; notwithstanding it manifests what one mind is capable of doing, which an inferior mind could not have shown.

There is something due to tone and quality. It is shown in two persons alike in physique, yet one person will endure fatigue that is unbearable by another. In both cases there is an indescribable quality which operates in this matter. I do not think that militates with his views. I do not think that Dr. Gray can be charged with trying to ride two horses; on the contrary, I think that is just what we see in nature throughout. This matter has a double force throughout.

As to his not being exactly logical, I think if you ever did try to run anything to a logical conclusion you always run against a snag. You can not apply rigid logic to the practical affairs of life; the contingencies are always present.

Dr. Hughes. As Dr. Gray is here, and as the paper just read interests him more than any one else, I propose to make but a few brief remarks thereon. I am glad to find a champion, before this

Association, upon that side of the question, but I must say that the champion is a little too far upon that side for me. As I had occasion to say yesterday, I do not subscribe to the materialistic idea that cerebral disintegration is the cause of volitional mental action. I can not conceive it possible that voluntary thought can be the result of molecular disintegration in the brain, as claimed by Dr. Wilbur.

If a ray of light infringing upon the retina, a material ray of light upon a material retina, transmits its impression through material changes produced in the optic nerve, &c., to the brain, and material disintegration takes place in the brain as a consequence, and mental action is manifested simultaneously with these changes, I can and am willing to admit the facts, without being able to discover the connection asserted to exist between these destructive changes and thought, as the result. I think the logic of these materialistic gentlemen is at fault. If their position be true, then we are mere machines; then the ray of light that infringes upon the retina, producing material changes there and through the optic track upon the brain, is the beginning of thought, and the resultant mental product—thought—is only its conclusion. Then the motion of the harp string, that occasions material vibration in the atmosphere, and that vibration transmitted through the tympanum to the brain, makes the thought that follows in the mind. According to this idea, thought is but the continuation of the motion of the harp string. I can not subscribe to this doctrine. I do not believe in mental disease as advocated by Dr. Wilbur. I believe in disease of brain and consequent changed or abnormal mental manifestation. If the mind could be diseased it might also die, and this would be contrary to the teaching of our faith. I believe that insanity is a disease of the brain. The Association has never yet, I think, pronounced upon the nature of insanity—never attempted to define it. I believe insanity is in every instance a disease of the brain primarily, or a reflected or transmitted one from some other organ of the body. I believe you can not have a disordered manifestation of mind, unless the brain becomes diseased. So far I coincide with Drs. Gray, Maudsley, and others. I can not conceive how disordered mental manifestation can take place through a perfectly healthy physical structure of the brain. The brain must first be disordered.

I subscribe, therefore, to the idea that the physical state of the brain has much to do with the manifestation of thought; the physical condition of the brain is all important to the rational or

irrational manifestation of mind, but I can not subscribe to the idea that mind is the product of the brain action.

Dr. Ray. I suppose, Mr. President, there is no question touching insanity which has excited more general interest, both in the profession and out of it, than that of the causes of insanity, and so profoundly were the professional public impressed with its importance, that at the earliest period when institutions for the insane were established in this country, attention was strongly called to it, and histories and books of record were prepared, with places for recording "the supposed causes of the disease, the age, the civil occupation and the country. It was supposed that the information thus collected would throw a great deal of light upon insanity, and help materially to cure the disease; because, knowing the cause, you have the first clue to the proper course of treatment. There used to be an old catch-word, and not very old either,—prevailing in this country." "Be sure you're right, then go ahead." It is an adage, all important for philosophers and men of science. In conducting their inquiries, let them be sure of the facts before they go ahead. Now what are the facts? When the patient is brought in, the friends are asked, What brought it on? They had talked it over, and heard the gossip in the village, and family, and in reply perhaps some one says that "he drank a little too much;" another that "it was the loss of a child," or "the loss of property." The next step is for the expert to determine the exact thing to put down in his tables, and it was generally some trivial circumstance that decided the choice. It was frequently impossible for any one, either friends or physicians to find any cause at all, and on looking over this table of causes recorded, we find that there has always been a considerable number in which the causes were unascertained. Now an element of uncertainty, to that extent, must certainly destroy the value of any conclusions drawn from these statistics, if nothing else. Are they thus far a proper foundation for any general conclusion? How, with a thousand facts in the case, and we knowing but half a dozen of them, are we willing to make the latter the foundation of any general conclusions? Then consider that there is a variety of circumstances and agencies in every case, which might be supposed, by one person or another, to have a great deal to do with the production of the disease. People of matured life moving in society are subjected to a great variety of influences which have a deteriorating effect, any one of which might be supposed to make a man insane. How often we hear a statement something like this.—

"The patient seemed to take a good deal to heart, the loss of a child, and besides that he has lost much property, and he has been very constipated." Here is a jumble of agencies, and who will undertake to say which was the really efficient one in producing the disease? The tables themselves show a map of confusion and imperfect information. You see side by side among the causes, "anxiety of mind, domestic trouble, disappointed ambition, loss of office." Such vague phrases convey no real information, and are scarcely worthy of being used in any scientific connection. It seems all this time as if there was a lurking suspicion that they had not found the bottom of the difficulty; because we find many called hereditary. These seem to belong to a class of cases which the writers are uncertain what to do with, but put them in there, supposing that sufficient of itself. In speaking of the mixture of causes I recollect seeing in a report of one of the eastern hospitals, on one occasion, one case put down, as "hard work and scuffling,"—whether this was accounted a moral or a physical cause, I could not make out. It was thought best by the reporter evidently to record the fact, and let the future make the best of it.

It has always been,—or certainly for a good many years,—understood that there was an agency for the production of insanity whose action is independent of local causes; that insanity may be of a hereditary character, transmitted from one generation to another. I think the tendency of our progress has been to enlarge the operation of this cause, and our records show that its potency has been more strongly felt as we have advanced in knowledge of the disease. I think that during the time hospitals have been opened in this country, the figure indicating hereditary cases,—where it has been expressed at all—has been steadily increasing; and as we have inquired more and more strictly, we have found that in the admissions to our hospitals, the influence of this agency has been more and more recognized.

One source of the little disposition to look to that agency, or to believe in its importance,—in its force and in its extent,—has been the wrong conception of what is implied by hereditary tendency.

Where cases have occurred in families in which insanity has been notoriously prevalent, and especially where a man's own father or mother has been insane, there has been question as to its hereditary origin. But where the insanity was a little further off, it was not supposed to imply hereditary agency. Here we have contradicted our usual philosophy with regard to other diseases. We do not, in speaking of the hereditary character of consump-

tion, or scrofula or cancer, suppose that those diseases have been actually transmitted in their overt state, that the child has come into the world with tubercles fully formed in its lungs, or cancer requiring extermination. I think there is no difference of opinion on that point. Why should there be with regard to diseases of the brain? If a man may derive gout from a grand-parent why not insanity? Is it not a common fact that insanity has been preceded, in previous generations, in some form or other by disturbance of the nervous system in the shape of chorea, epilepsy, hysteria, catalepsy, or plain simple persistent headache? I think a little observation will teach as that many cases may be traced to the last mentioned ailment in a previous generation. We know very well that chorea, epilepsy or other nervous disease is often followed by overt insanity in another generation. Where it appears that this class of facts is kept out of the account, what weight can be claimed for opinions upon the subject of causation. The more I have witnessed insanity, the more firmly I am convinced that it is the work of more than one generation. I do not mean to say that it can never be produced entirely and completely in a single individual, but I do say such cases are very rare.

Dr. KIRKBRIDE. I have very little to say on this paper, but I must confess that my observations have led me to different conclusions from those of my excellent friend, Dr. Ray, (from whom I rarely differ, and to whose opinions I generally defer with a feeling of safety,) on this subject of insanity being so very often produced by hereditary influence. We all know, that in many cases this is perfectly clear. The hereditary tendency is so strong that trifling causes seem to develop the disease. But in my experience this applies to a small portion of all the cases that come under observation. If a man's parents, grand-parents, and great-grand-parents have never been insane, or shown any tendency to it, I can not conceive how his uncles or cousins being insane, could have anything to do with the development of the disease in himself, or be a reason for calling it a case of hereditary transmission. I should not call any such case one of hereditary transmission, where I found nothing in the line of direct descent. If you take headaches and nervousness of some kind in some member of a family, as a proof that there is a tendency to insanity, few families are likely to escape. My own impression is, that if we investigate these cases carefully, we will very often find something more than simply hereditary influence, that developes the insanity, and without which it would not have occurred.

Dr. EVERTS. I desire to ask a question, of course recognizing the fact of the insanity of one's own parents does not involve the necessity of the child's becoming insane; but I ask when your uncles have been insane, and markedly so, and insanity should be marked in your case, would you not regard it as a hereditary influence?

Dr. KIRKBRIDE. I should regard it as a coincidence; but if neither parents nor grand-parents had shown any tendency to insanity, I certainly should not regard it as a case of hereditary influence.

Dr. WILBUR. Before the discussion goes further, I wish to say, that I acknowledge freely that I had preconceived opinions in preparing the paper; but it seems to me that this is a different thing from preparing a table under the influence of a preconceived theory. That is the objection I brought to these tables.

As to the statement that I have manipulated the tables of Dr. Gray,—I have not except in striking out the unascertained causes. The figures in relation to these have no more bearing upon this question of ratio, than the statistics of the Orphan Asylum at Utica. They should be excluded by our ignorance of the facts in reference to them. They are not properly an element in the calculation.

Dr. GRAY. I do not propose to discuss the question which I have already discussed in the paper alluded to. I am sorry I was not present when Dr. Wilbur's paper was read, but as Dr. Compton suggested, I went off with a committee. I shall not attempt to speak on the merits of Dr. Wilbur's paper until I have had an opportunity of reading it carefully.

I would make one remark in reference to what Dr. Ray says of tabulation of causes, and to one of the elements entering into that table, that of unascertained causes. I do not see myself that, taking a given number of cases about which there are no facts whatever touching upon the causation, and throwing these out, we are to vitiate, in any degree, the causation in those about which you have positive facts. The value of a tabulation consists in the collection of a certain number of cases without respect of time or character of individuals, the class of society from which they come, &c., and tabulating them so far as you have ascertained facts. Those about whom you are entirely ignorant ought to be excluded.

In regard to hereditary tendency, alluded to by Dr. Ray and others, if I understand Dr. Ray, he takes the position that in any case of hereditary tendency to physical degeneracy, that may be

transmitted from one generation to another, there needs to be no superadded cause, but that it finally blooms out into a form of disease—in other words, that there are cases where the degeneracy continuing, it finally becomes the mode of death of that individual, and the mode of death in that line of progeny. Now I am not disposed to attempt the controversion of that here, but I have observed this, (and I have given very careful attention to this question as an important element in causation, and I have been aware that gentlemen prominent in the profession have not given much confidence or study to causation in detail, while others, as Dr. Ray has remarked, associated with the discussion on insanity in the early history of this Association, have argued the importance of all facts, gathering a very wide range of supposed or real cases, even down to "scuffling,") that in undoubted hereditary cases, the same causes operating to induce insanity in those in whom there was no hereditary tendency, also induced it in those in whom there was a hereditary tendency; but as remarked by Dr. Kirkbride, it required a much stronger influence in the same direction to develop the disease in those who had no constitutional tendency. I do not infer that, because they are more easily disturbed, in cases of hereditary disease, they are already insane; because if the position taken by Dr. Ray is correct, then the disease exists already, and the man is a lunatic from the day he is born, and only awaits a certain transformation to become more markedly insane.

Dr. Shew. Do you propose in physical causes to include hereditary cases?

Dr. Gray. I regard heredity here as a physical susceptiblity the same as in tuberculosis and syphilis. I have had a number of cases where I think the insanity was due to syphilitic degeneracy.

Dr. Shew. Those are included in the 85 per cent.?

Dr. Gray. I have stated in general terms distinctly, in the paper, what should be included under moral, and what under physical. I stated in remarks preceding the tabulation, what were and what were not to be considered moral causes. I think if you will look back to my report of 1863 you will find that I took the same causes which Dr. Brigham had laid down, as moral, and physical, and used those, as Dr. Ray has stated, as probably embodying the ideas of men in the very highest position in this specialty at that time, as to what constituted a moral cause. There has been no change since in the tabulation of causes in Dr. Brigham's cases between moral and physical.

Dr. Cook. I wish to speak simply on the one point, as to

whether hereditary influence may develop insanity without other cause. I remember a case that came under my observation not long ago, of a young woman about twenty-four years of age. The history of the case is briefly this; the father was noted as being a peculiar man. He was exceedingly diffident in his intercourse with his family, and his neighbors, but was never regarded as insane. This peculiarity rather increased with age. He had two children, one daughter who resembled him physically and mentally from birth. From early childhood, she had this peculiarity of the father; she was exceedingly diffident as a child, and at the age of ten or twelve years, would often say to her sister, "Don't look at me." As she grew up to womanhood this diffidence became more marked; she secluded herself more and more; finally she would cover her face, so that her mother could not see it, eat only after dark, and gradually her whole life and conduct was swayed by delusive ideas. I think such a case, studying the facts, has an important bearing upon this question of hereditary influence; and it is with that view that I give it. Having all the facts before me, I could find no other cause than hereditary transmission, developing as I have stated. That such a change occurred, and that the disease can be transmitted and developed without other cause, I think is an unquestionable fact.

Dr. WILBUR. I have nothing to say except upon a single point; that is in reference to the tables. The object of my presenting the first table was to show that, if it proved anything, it proved that moral causes had disappeared entirely, for the physical causes were one hundred per cent. It seems to me that it is precisely the same as if those cases which were recorded as "unascertained causes," had never been sent to the asylum. For the presumption is, that if the history of these had been known, the ratio would have been the same as in the "ascertained causes."

Now in relation to the table of religious causes, Dr. Gray had given this to show that the views of Dr. Brigham were changing. Revising this table, by leaving out merely the unascertained causes, and it shows that there was no very great change in his views. Thus much in reference to the first table.

As to the second table, the only thing I have done was to show the cost of medical supplies in connection with the other statistics of the institution at Utica.

Dr. RAY. I think my views have been mistaken with regard to hereditary influence, the same mistake that is ever prevalent on the subject.

To say, that a disease which exists in a person has been transmitted to him from a previous generation, existed in the shape of an intense headache, is one proposition; to say that because a man has a headache his posterity must necessarily become insane is a very different one. The logic that confounds two such propositions would make small-pox not contagious, because occasionally a person is exposed to it without taking it. It is not implied in this doctrine of hereditary transmission, that the disease must of necessity be transmitted from one generation to another; we only say when it does appear, that was the cause of it. By the influence of other causes, the hereditary element may be kept in abeyance, until it dies out altogether. Is not the transmission of other diseases subject to the same laws?

The paper was then laid on the table.

Dr. Landor then read a paper, descriptive of the Asylum at London, Ontario.

The SECRETARY. The Committee on Business, recommend that we have a business meeting at 7 1-2 P. M., this evening, to hear a paper by Dr. Workman.

The recommendation was agreed to.

Dr. Palmer extended an invitation to the members to visit the Institution for the Deaf, Dumb and Blind, at Belleville.

On motion the Association adjourned.

After adjournment, the Association proceeded to the residence of the Lieut. Governor of Ontario, where they were very handsomely entertained, then to the Normal School, and then to the University of Toronto.

EVENING SESSION.

June 7th, 1871.

The Association was called to order at 8 1-2 P. M., by the President.

The Secretary read a letter from Dr. Callender, expressing his inability to be present at this meeting.

Dr. GUNDRY. I have to report on behalf of the Committee on the time and place of holding the next meeting, that we have considered the subject and concluded to recommend to the Association to meet next year at Madison, Wisconsin, on the third Tuesday of May. Several other places were mentioned but we thought, considering the cordial invitation we received from them, that place should be selected.

Dr. MCDILL. The first week in June, would suit me the best, but I will not be tenacious as to the time.

Dr. Walker, moved that the report be accepted and laid on the table, and that the subject-matter be considered to-morrow.

Dr. Gundry called for a division of the question, urging that the matter might as well be disposed of now.

The report of the Committee was accepted, and on motion it was laid on the table until to-morrow.

Dr. Workman announced that he had received a telegram from the Attorney General, stating that he regretted very much that he would not be able to accept the invitation to attend the meeting to-morrow.

Dr. Workman than read a paper on Demonomania.

After the reading of the paper,

Dr. GUNDRY said: Mr. President: Of course in common with every person here present, I have been very much pleased with the reading of this paper. There are only one or two points on which I wish to enter a protest,—just one or two which I can not willingly let pass. I take exception to the Doctor's calling Cromwell a usurper, and speaking of the ignorance of the Jesuits. That the Jesuits did not rise above the prejudices of their age must be granted, but that they displayed it more than any other portion may be doubted. The direct result of their labors was to diminish ignorance. That Cromwell had any hand in in it, I think may be safely denied.

Dr. WORKMAN. I did not say so, sir.

Dr. GUNDRY. He never interfered with witches.

Dr. WORKMAN. He never saved one.

Dr. GUNDRY. It is thought he saved a few. If he did not, he

sustained the great Bishop Usher, an Episcopal clergyman who did not side with Cromwell, and again he endeavored to give freedom to the Jews. How is it possible that he, wishing to prevent the recurrence of ignorance, should denounce Cromwell.

Dr. WORKMAN. I meant to say that this occurred about his time.

Dr. GUNDRY. Then Baxter was a friend to Cromwell, and all the time suffered for it. Matthew Hale protested against him, yet Cromwell never removed him from the bench, and he remained there until Charles the Second came upon the throne.

Dr. WORKMAN. He was a good witch hunter.

Dr. GUNDRY. Matthew Hale was undoubtedly a good witch hunter. From the short period of Cromwell's so-called usurpation and injustice to the house of Stuart, the fact should not be withheld. Inasmuch as James First of England, is charged with having written in favor of the punishment of witches, you may infer that Cromwell was part and parcel of that faction. It is against that I wish to protest. And then the period from 1603 to 1680 covers a much larger portion of the reign of the house of Stuart than that of Cromwell, and then again in 1630, I believe that destruction prevailed much more in Charles the Second's reign, than at any other time. That this party did it more than anybody else, simply rests upon the evidence of Hudibras.

Dr. WORKMAN. You are not fully read on the subject.

Dr. GUNDRY. It so happens that the student or the poet bodies forth the image of his time; and we naturally take him as the type of the people of his day. Instead of ignorance being on that side, it was on the other side. Unfortunately ignorance and credulity were peculiar to the entire class, but a large mass of the people were on the side of the Puritans. Macaulay speaks of the nobles and squires who had nothing to do with the Puritans. I think investigations show that Cotton Mather was not so deeply implicated. Instead of urging it on, he rather (in a feeble way perhaps) attempted to moderate the matter. I suppose you might have counted on your fingers the few men who differed from it, until Chief Justice Hale ruled against the idea of witchery, which I believe was in 1669. Until that time, I suppose, most people made up their own minds about the formation of witches or went with the popular side, as is now generally the case, not only in England, but in France, Germany and Italy, and in other parts of the world. To fasten this stigma upon Cromwell, the greatest man who ever held dominion in England, and the most talented man,—that he should be branded in this way, is too much for any

man. I desire you, in the spirit of Christianity, to admit that it is possible for you to have been mistaken.

Dr. WORKMAN. What do you say of the three massacres in Ireland?

Dr. GUNDRY. Perfectly right. The cure of the battle is the best, sometimes.

Dr. RAY. It may be worth our while occasionally to call up the delusions and forms of disease that existed in the past, although they now appear only events of the past, having no connection with the present, in order, if possible, to extract from them something for our own improvement. One of the most prominent and practical lessons taught by the history of the witchcraft delusion, is that of the contagious or epidemical character of all forms of mental disorder. Although it might seem at first sight that such a mental disorder would contain the contagious element in the least possible degree, yet the records of those times, show that that form of mental disease prevailed as epidemically as any other in existence. Scarcely a single instance can be found where one case was not followed by others, even under the most unlikely circumstances. You may recollect the case of Grandier, a French priest in the reign of Louis XIII. It attracted considerable attention at the time, for he was a man of some note; having given offence to the governing powers, he was finally accused of witchcraft. He went through the several stages of a prosecution, which finally ended in his condemnation as a witch. It was within a short time of his death several persons, engaged in the prosecution, became possessed and actually died—the judge who presided over the trial, one or two brother priests who were engaged in urging on the accusation, and several others more or less concerned in the affair. They became possessed and died in the utmost agony of mind. In the convent and nunneries in the fourteenth and fifteenth centuries, this class of mental affections spread epidemically to a remarkable extent. Case after case would occur until the whole establishment was affected.

The lesson I would draw from such facts is, that the close proximity of persons afflicted with mental disturbance to those likely by predisposition to be so afflicted, is favorable under certain circumstances to its development. The only element favorable to its production is that of predisposition, whose action is favored by united sentiment, and united interest or active sympathy. Undoubtedly the presence in a family of the actual disease tends very greatly to its production in others of the family, and that furnishes

the strongest argument in the world for the removal of the insane from home.

We see in the history of this affection, certainly, the beneficial influence of the spread and progress of knowledge. It seems almost incredible to us now, that men so well educated as some of our ancestors certainly were, should have brought themselves to believe as they did in demoniacal possession and satanic influence; although by a curious conjuction of ideas, it was not an uncommon opinion in the world that insanity was the result of the special visitation of God, and was so described in many law proceedings. Gov. Winthrop, in his history of New England, I recollect, speaking of Diantha Talboy, who was executed for killing her child, says she listened to the suggestions of Satan, who persuaded her to kill her child in order to save it from future trouble; not one word was said about insanity, yet Gov. Winthrop represented the highest grade of the moral and intellectual culture of his time.

Dr. Compton. I have nothing to say except to express myself as being charmed or bewildered by the paper which has just been read. I must pronounce the distinguished author a master Workman on that subject.

Dr. Hughes. I do not think that the once popular belief in diabolical possession has entirely subsided; and as there are two standpoints from which this question may be viewed, one, the theological, and the other pyschological, I am glad to find that, in a member of this Association, the advocates of those who believe in the latter view have found so distinguished and able a representative as the author of this paper. I desire, as one member of the Association, simply to express my satisfaction at hearing that question discussed at this time, and in the able and exhaustive manner peculiar to Dr. Workman in all his papers.

Dr. Walker. My brother Gundry seems to think I ought to say a word for Massachusetts. I do not know that she needs it. I have only to say in regard to the paper of Dr. Workman, I have listened to it with deep interest, and have been exceedingly gratified with it, not only for its catholic temper, but what I believe to be, in the main, its accuracy in point of fact. As to Massachusetts, perhaps we ought to bow our heads—not in shame, but in sorrow—that her best and wisest men should have been carried away by a delusion so gross and so sweeping as that was; yet, in reply to that, I point you now to her six great asylums for the insane, where to-day she is engaged as earnestly as she was in persecuting them in the olden time, in pouring the oil of love into humanity's

wounds, and in the exercise of that broad spirit of charity, first taught by the Good Master who, yielding up his life with his blood, could say with his last breath, "Father, forgive them, they know not what they do!" So much for Massachusetts.

Dr. JARVIS. This matter of history which Dr. Workman has given so elaborately and satisfactorily is of interest as one of the illustrations of epidemic manias, which have at times spread more or less since the world began. We see this in politics, in religion, and in business speculations. We see all at once a sudden development of an intense interest in certain doctrines and ideas, strange and different from what they were before. The world first takes hold of them: they first adopt their conclusions; they find their reasons, and then the facts.

In regard to speculations of property, I remember that, thirty-five years ago, every body believed lands in Illinois were to be a source of immense wealth. Lands bought at a dollar and a quarter an acre could be sold at forty and fifty dollars an acre. I was informed that towns were laid out sufficient for business purposes in Illinois when the State would have six millions of inhabitants. At that time a very extensive and apparently successful speculator in Chicago said to me, "I am continually buying and selling land. I make it a rule to ask, and I get twice as much as I gave, for there are always people enough ready to buy at that rate." After a while the delusion passed away; the people awoke from their airy dream, and found their lands worth only what the Government had sold them for, and the improvements made upon them. I think this explains many of the commotions in society, and is the cause of a great deal of distress in the world. One step after another is taken, and the popular credulity stretches until the bubble bursts, and all faith is lost, and the world wonders that it could be carried away by so little reason.

Dr. WORKMAN. I have very little to say in reply to what has fallen from gentlemen with regard to this paper, but I think you will all acquit me of bringing in a bill of indictment against Massachusetts. I thought I dealt with Massachusetts rather mercifully. I spoke of the Massachusetts trials as a mere afterpiece of the great European tragedy. It is true that the witch mania took place in Massachusetts when it had died out in the old country. Dr. Ray spoke of it as an epidemic. I do not believe in epidemics that are produced by inoculation. I may be wrong; it may be the history is imperfect from which I quoted, but I am accustomed to speak of men both in the present and past exactly as I feel their character warrants.

As to the conclusion of my paper, I did not enter into the details of other countries and continental nations, because I thought we were chiefly concerned with our own country. I think it is known to you that witchcraft is not dead. If you live in insane hospitals, you can bear evidence with me. I could give details, but I am reluctant to do so. Some of the parties live in this vicinity. Some of my patients have inquired whether the diabolical doctrine was not the doctrine of their church, but have received no decisive reply from the clerical gentlemen interrogated. With regard to Dr. Gundry's strictures, I think he is entirely mistaken. I simply spoke of the ten years during which Cromwell ruled. The term usurpation he did not like. My forefathers came over to Ireland cutting throats for Oliver Cromwell. Speaking of him, I do not say he had anything to do individually with the witchcraft murders that occurred in his time; still, in the ten years of the Cromwell usurpation, as many witches were burned in England as in the sixty-seven of the Stuarts. I am astonished that Dr. Gundry has said that my statements are based on no better authority than of Hudibras. This proves that he is but imperfectly read in witchcraft history. I hope that at the next meeting we shall have counter papers, and I will then be better posted myself. I intend to make the subject one of close study.

Dr. GUNDRY. Allow me to correct one word. I did not say, or at least did not intend to say, that Hudibras was quoted as authority, but that the popular impression was derived from his poetry.

Dr. WORKMAN. I accept the explanation, but that was not the word he used.

Dr. GUNDRY. It was merely in relation to the title used by him.

On motion the paper was laid on the table. The Committee on Business recommended that the Association meet in the Parliament Rooms, at 9 A. M., to-morrow, Thursday, which was agreed to.

The minutes of the meeting were read and approved, and the Association adjourned.

THURSDAY, June 8, 1871.

The Association met in the Parliament building and was called to order at 9.30 A. M. by the President.

The Secretary read a letter for Dr. C. K. Bartlett, of Minnesota, explaining the cause of his absence from this meeting.

The PRESIDENT. I have received a letter from Dr. Stribling, of the Western Lunatic Asylum, of Virginia; it may not be known to all the junior members of the Association that Dr. Stribling is one of the original thirteen who met twenty-five years ago at Philadelphia, and that he has always been one of our most devoted and energetic members.

The President read a part of the letter, as follows:

"I have for a long time feared that I am considered a most lukewarm and indifferent member of our Association, because of my frequent absence from its meetings. Circumstances which you will appreciate have prevented an earlier explanation. Most sincerely did I desire to be with you at Hartford last summer, and would have liked much to attend the approaching session at Toronto, but can not do so for many reasons. I pray you to assure the Association that my interest in the noble cause for which they so assiduously work is unabated, and that for the individual members, many of whom I have known long and well, I cherish the most sincere regard."

Dr. Stribling has explained to me the reason for his absence, and tells me he is detained at home by peculiar duties over which he has no control, and which render it impossible for him to leave the institution. In common with all the members of the Association, I deeply regret his absence.

The Secretary read a memoir of Dr. Fonerden, prepared by Dr. Stribling, at the request of the Association:

IN MEMORIAM.

At a meeting of the Association of Medical Superintendents, held in June, 1869, the undersigned was appointed to prepare a memoir in reference to the late Dr. John Fonerden. But for my inability to attend the session of the Association at Hartford, last summer, this duty would have been sooner performed.

Although I had known Dr. Fonerden sufficiently to inspire me with sincere admiration and cordial esteem, my acquaintance was

not of that character, nor our intimacy such, as to qualify me for undertaking anything like an extended biographical sketch. Indeed, for the few facts which will be herein detailed, I am indebted almost exclusively to Dr. R. S. Stewart, the able and veteran President of the Board of Maryland Hospital, who may, with emphasis, be termed the *Patron* of our deceased friend, and who was, for many years, his most intimate associate, professional and personal. It will be my aim also, in what follows, to adopt in so far as practicable, the language of Dr. Stewart.

Dr. John Fonerden was born in the city of Baltimore, in the year 1802, of respectable parents, who aimed to educate their children in the ways of virtue and the paths of science. His mother was of a refined and gentle nature, and for many years a consistent and valued member of the Wesleyan church. His father was a man of somewhat extensive range of mind, and had early adopted the opinions of Swedenborg, in which he became deeply versed. He was, however, more contemplative than controversial, and as this sect was quite limited and somewhat animadverted upon, he was cautious in giving expression to his belief.

The subject of this memoir inherited from his parents a gentle disposition, and in his youth yielded naturally to the influence of his good mother, who was more demonstrative as to her religious views than was her husband. He observed his mother's excellences, regarded her teachings, and was, even after he reached his manhood, content to follow in her footsteps. After the death of his father, he in some way became possessed of a box containing books which had been left by him. Probably under the promptings of mere curiosity, he undertook to examine their contents, became interested in the doctrines set forth in the New Jerusalem system, and had studied and embraced them for a considerable period, before his mother was aware that his thoughts or inclinations were in that direction. She of course received that announcement from him with surprise, and doubtless, for a time, brought to bear against his views both argument and persuasion; but, finally, with that sweet spirit of charity which had always characterized her, she withdrew her opposition.

Dr. Fonerden made no effort or display in order that the outside world might become apprised of this change in his religious faith, but moved on in the even tenor of his way, a charitable, discreet, genial member of the medical profession to which he had attached himself. His personal friends were numerous, and embraced many shades of religious belief, Protestants, Romanists, Israelites, and

some few who professed to be Atheists or Deists. Wherever honor and virtue led, he with love of science and Christian charity followed, and as if by a divine alchemy, he, like the bee, seemed to extract honey from flowers most diverse in their nature; not only so, he laid it up for winter's use. He was not learned in ancient and in modern literature, but was well read in his profession, and was a judicious and successful practitioner. When he did not clearly see and understand the path before him, he cautiously and wisely "held his hand," preferring to await the "*vis medicatrix naturæ*" to venturing upon "heroic action."

In the earlier portion of his professional life, he devoted himself especially to midwifery, and became, in this line, one of the most popular and reliable practitioners in the city of his residence. He was of a sensitive and diffident nature, and hence shrank somewhat from the class of mental and nervous diseases, to which he subsequently devoted so faithfully his talents and his energies.

In the year 1847 or 1848 Dr. Fisher, who had for many years performed most acceptably the duties of resident physician in the Maryland Hospital for the Insane, resigned his office. Dr. Stewart has been since the year 1828, was then, and still is, (although acting during this long period under various titles) the *Governor de facto* of that Institution. He being deeply impressed with a sense of his responsibility, and looking only to the best interests of the institution, soon tendered the office to Dr. Fonerden. I can not do better in this connection than to copy almost verbatim from a letter of Dr. Stewart's now in my possession:

"In selecting Dr. Fonerden I was governed by my knowledge of his mind and his heart. In morals, I knew him to be as perfect as a 'true woman.' His general acquirements well fitted him for the undertaking, but his own modesty, and his deficiency in natural combativeness, made him shrink from the idea. He had married a lively lady, and had a small family all equally repugnant to contact with the insane; nor could he be brought to consent, until I promised to provide for him a separate residence at some distance from the hospital. So diffident was he as to his fitness for the position, that he also stipulated for the privilege of resigning in a year if he could not become educated to it. In a few months, however, he grew familiar with his duties, and gave finally a striking proof of the power of mind over matter, for he undertook to brave the supposed dangers of a mad-house by the force of his will and a sense of duty. Cautious he always remained, but never terrified. He had a calm, benevolent, yet determined expression of coun-

tenance that gave command to all around him, and seldom had he to resort to other means than personal manner to control his subjects. Though his position was subordinate, the perfect harmony between his chief and himself, made but one mind in operation, and for twenty-two years he had the unlimited control of the Maryland Hospital, and the highest confidence of its Board of Visitors."

Though Dr. Fonerden had passed his three score and five years, he was not worn out, and, but for a local affection, would probably have much longer discharged with energy and efficiency the duties of his position. For many years he had been inconvenienced by scrotal hernia. Hydrocele, with varicose vessels of spermatic chord, supervened. This complication interfered materially with his personal comfort, and, as he believed, impeded his usefulness. He thought of the surgeon's knife as affording the only remedy, consulted medical and other friends in Baltimore, and was advised against such resort. In April, 1869, he visited the Massachusetts General Hospital, at Boston, in order to avail himself of its far-famed advantages. There, too, he was discouraged by surgeons and friends from the undertaking, but he seemed to have resolved on the experiment, and, as the result of his importunities, an incision was made, probably by way of mere exploration. The operation is said to have extended no further than "the opening of a few cysts, the contents of which were discharged."

Inflammation was followed by suppuration, and gangrene soon supervened. That mind which had so long and so successfully directed and controlled the disorganized intellects of others, lost its balance, and gave utterance chiefly, if not entirely, to the promptings of delirium. But a few days elapsed until death came to his relief.

It is worthy of being here noted that at the time Dr. Fonderden left his charge, erysipelas was prevailing somewhat extensively in the Maryland Hospital. He must have overlooked or disregarded this fact. Is it not probable that the fatal result is, in a great measure, attributable to a morbid condition of the physical system, contracted by him while at his post of duty?

May we not confidently trust that our departed friend and co-worker has but exchanged a life temporal, and beset with the trials incident to earth and humanity, for one immortal and eternal, in mansions to which his ransomed spirit was welcomed with the plaudit, "Well done, good and faithful servant."

FRAS. T. STRIBLING.

Staunton, Va., May 19, 1871.

On motion of Dr. Curwen, it was resolved that the memoir just read be entered on the minutes.

On motion, it was resolved that the Association visit the asylum for the insane at London to-morrow, Friday, and hold a session there in the evening.

The report of the committee on time and place of next meeting was then taken up.

Dr. Walker moved to strike out Madison, and insert St. Louis, which was not agreed to; and the question recurring on the adoption of the report, it was agreed to, and the time fixed the last Tuesday of May, 1872.

Mr. Hastings. Mr. President and gentlemen of the Association: I beg the privilege of making a remark or two at this stage of your proceedings. Although honored with a seat in your body, I am an outsider, and hence feel at liberty to say some things that might be of questionable taste coming from a member.

I feel that in deciding to hold your next meeting in Madison you have conferred upon the people of our city and State a great honor. To have in our midst a body of men such as compose this Association, is an honor that I am sure our people will appreciate. It has been my privilege to attend the meetings of numerous associations and conventions during the past twenty-five years, but in many respects this Association exceeds them all. Your members are all engaged in a special work, the care of the insane. To discharge the duties of the positions you hold or have held, requires peculiar qualifications, not only of the head but of the heart. None but the ablest and best of men are qualified for the positions you hold. The fact that those especially charged with the care of the insane have selected you to fill these positions, shows the estimate in which you were held by those best able to judge of your character and qualifications, and the fact that you continue to fill these positions year after year, in some instances for a period longer than an ordinary life time, shows how wisely the choice was made. The positions you occupy require that you should all be men of liberal culture, and the papers which have been read before the Association at its present, as well as its former sessions, show that your members are abundantly qualified to consider and discuss the grave questions that meet you in the discharge of your important duties. On the rolls of your Association can be found the names of some

of the most honored and beloved of those who are recognized as the benefactors of mankind. Of those who have ended their labors and gone to their rest, I may mention the honored names of Woodward, Brigham, Bell, Ranney, Benedict, and of those who are still engaged in their noble work are Butler, Ray, Jarvis, Kirkbride, Workman, Walker, Earle, Tyler, Gray, Landor, Nichols, Brown, Bancroft, and others, whose names are as familiar as household words all over the land, among those whose attention has been drawn to the wants and the care of the insane; men that it is an honor to be associated with, whose intelligence and whose benevolence are such as to secure the love and esteem of all who come in contact with them. I have been especially pleased with the ability, courtesy and liberality shown in your discussions. Views, that in some associations, by reason of their variance from those generally entertained, would produce the deepest feeling, if not the wildest excitement, are here listened to with calm and respectful attention, and their authors treated with the same kindness and courtesy as though they had given utterance to sentiments that found a hearty response from every listener. Without occupying any more of your time, allow me to thank you on behalf of the officers of our city, and of our Governor and State officers, representing the people of our city and State, for the honor you have conferred in selecting our beautiful city of Madison, the capital of our State, as the place of your next meeting, and to express the earnest hope that all who are here at this meeting will favor us with their presence at your next session; that the pleasant acquaintance and friendship here formed may be be continued and strengthened, and that my friends and neighbors at home, may enjoy the high privilege of forming your personal acquaintance, a privilege that I regard as one of the most cherished of my life.

The Committee on Business reported that the next business in order was the consideration of the report of the Committee on Statistical Tables.

On motion of Dr. Curwen, the Association proceeded to the consideration of that report.

Dr. Jarvis. Copies of the report in extenso have been in the hands of the members of the Association for several months. I have endeavored to get it up in such a way that the experience of every hospital can be presented, and made useful as a matter of study. I have been in the habit of examining the reports of all

the hospitals in this country, many in England, Ireland, and Scotland, and in continental Europe. In drawing up the report, I endeavored to concentrate their wisdom. After a great deal of thought, comparison and coördination, I arranged these forms. I do not mean to say, that this system is perfect; I think by further experience and observation, valuable suggestions will be made, which will improve these tables.

Dr. KIRKBRIDE. I regret to say that it is some time since I looked over these tables; but I have no doubt whatever of their convenience and usefulness, from the simple fact that Dr. Jarvis has compiled them, after a very full examination of all the forms of tabulation that have been recommended, and his recommendations may fairly be considered almost conclusive on that point. There may be some difference of opinion with regard to the value of these tables; but a large part of them are those which I have been in the habit of preparing, and from which I have always supposed some advantage was to be derived, enough certainly to compensate for all the trouble their preparation had given. As you are aware, I have always prepared more tables than some of my friends, for whose judgments I have the greatest respect; and while the labor has been considerable, as I have already said, I have always thought there has been enough benefit to justify their continuance. The value of all statistical tables, necessarily depends upon the care used in their preparation, on the ability of the compiler, and upon the number of cases, and the length of time to which they refer. Because statistical tables are not perfect, does not seem to me any reason why we should not attempt an approach to perfection. Many statements in all tables must be matters of opinion, and I do not see why an opinion in regard to points connected with insanity, may not be just as reliable and as valuable as on any other subject.

Dr. SHEW. I received a copy, and read it through with a great deal of interest; and as the time was approaching when it would be necessary to prepare our reports, I decided to follow these tables. Our institution being a new one, having admitted up to this year only four hundred patients, it seemed to me that by adopting this form we should be making progress in the right direction thus early in its history. I can assure you that it will require some time and attention to make up the reports, particularly in older institutions where the number of patients received has amounted to thousands; but after the tables are completed once, the labor for each succeeding year will be comparatively small.

There are one or two practical suggestions I would make. By referring to table No. 20, "Causes of Disease of those recovered from the beginning" of the hospital—a valuable table, but in looking through all the tables you find no one devoted to "Causes for all cases." There is simply a table of causes of those recovered from the beginning. I would ask if it would not be advisable, in some part of this statistical report to have a table of causes, or supposed causes of all cases admitted. There is none in the entire report. I think there should be something in this form, or some other form, to give as near as possible, the physical, or to those who view it in that light, the moral causes.

Dr. JARVIS. If it is not in the report it is a very gross mistake of mine. I have been led to imagine that it is there, and that I put it in.

Dr. SHEW. I made up my mind that in our next report we should insert it, whether the Association adopted this or not. We did not insert it this year, but followed the exact tables.

Further on, we find table No. 30. This gave us some trouble to reckon the per cent. of recoveries of each year, cases of one year and over; all discharged (including deaths,) and so on. Then the last average gives deaths of all under care; then deaths of the average number in hospital. I would suggest that an additional line be made at that point, to give the deaths of the average number for the entire year. It can be done by simply one line at that point, and very little additional labor. In the last table is furnished the financial history. In this table, No. 33, giving the year, (each year of course,) whole cost of supporting patients per year and per week. I can imagine that this table might mislead, from the fact that different institutions are differently organized. For instance, in our institution, the whole expense for all purposes whatever, (improvements, repairs, construction, salaries of officers and employés, and the general support of the institution,) everything is included in this table; but I know that some other institutions in giving the cost per year, per week and per day, have only included the support of patients; the salaries of the officers being a regular State appropriation especially applied to that object. I think that in New Jersey, New York, and it may be some other States, the salaries of the officers are included in the annual appropriation bill, the same as the salaries of the Governor and Lieutenant Governor, and do not appear in the history of the institution. Hence in estimating the average cost per week as five dollars per patient in some hospitals, and in others six or seven

dollars, there might be an apparent unjust difference; therefore in this table something additional might be put in the form of notes or columns, stating that this does not include the annual professional support, or, as in our case, that it includes everything.

In table No. 12, complications in those admitted, males, females, total, in the year and from the beginning, I suppose there will always be some difference of opinion respecting the facts contained in this table; but I ask of Dr. Jarvis, or the committee who prepared these tables, simply for a little instruction in making it out. We have followed it as nearly as we could, but do not exactly understand it. By a complication, do you mean some physical disease not belonging expressly to the neuroses? For instance, some might think it of interest to report that a certain number of our patients have suffered amputations of the right or left legs, or facts of that kind. I suppose that that was the object of the table; but we find here forms, aphasia, then apoplexy, then chorea, then hemiplegia, and so forth. It seems to me that many of these would be termed causes of insanity, rather than complications in the disease; for we have in addition, paraplegia, paralysis, agitans, progressive muscular atrophy, and heredity.

Dr. JARVIS. That is taken from the English. It is exactly their form of words. I think that explains itself.

Dr. SHEW. That is what I wish to know, whether any one can make the list as long as he pleases? Simple complication, schirrhus of breast, &c.

Dr. JARVIS. That is the English form.

Dr. SHEW. Perhaps a word in addition to the heading would save considerable trouble and study on the part of others. You wish it to be merely nervous complications, &c.

Dr. JARVIS. Yes, that is the intention; yet gentlemen can make additions if they think proper.

Dr. SHEW. These were all the points that puzzled me at all, or elicited any thoughts or suggestions that would be important.

Dr. JARVIS. In the omission of causes, I can not explain it in any other way than that it must have slipped out. I thought it was in.

Dr. PARSONS. I would like to inquire whether some of the other causes would not be considered important; for instance, if a considerable number of the insane had phthisis pulmonalis.

Dr. SHEW. One additional thought occurs to me while looking over table No. 2, and it has a bearing on our discussion of the first evening or first day in reference to cases reported as not insane. I

find that this misled our friend Dr. Parsons in his estimate of the total number.

You will notice in table No. 2 we report so many discharged recovered, improved, stationary, died, and not insane. I suppose every institution, if it is organized as ours is, to exclude idiocy, will sooner or later have cases sent to them legally, which they can not refuse to receive, but will be able to discharge soon after receiving, as idiots. A word of explanation in the form of a foot note would probably have prevented Dr. Parsons from being misled at that time.

Dr. Parsons. Perhaps I misunderstood Dr. Jarvis. I would like to inquire if complications such as phthisis pulmonalis are intended to be included, or such only as are mentioned in the original draft?

Dr. Jarvis. These are merely according to the opinion of the several Superintendents. Some put in as causes, are probably preceding or coexisting events, and some even are rather the consequences than causes of the disease. It is best to take them as reported by the Superintendents, and every one will make the needful correction.

Dr. Bancroft. I think such a modification should be made in the table relative to cost for support, as would show the cost for support irrespective of expenses outside of board. I know of some hospitals, and I think there are quite a number, in which no expense for the clothing of the patients is assumed by the hospital. Any expense for clothing is a separate affair, and is charged to the friends of the patient, or when they are supported at public expense, to town or counties. I think that should be so arranged that the cost of support, when stated, should be irrespective of any thing furnished,—simply living cost,—otherwise we shall be liable to misrepresentation between the different States. It seems that in the report of Dr. Shew it includes every thing, while in other institutions, as in ours, the mattter of clothing, or other articles furnished, and even to some extent, repairs, are outside of the support account. With us, in order that board may be reduced as low as possible, we have funds devoted to certain improvements and repairs, which otherwise would come into the board accounts, and that is kept entirely separate from the ordinary accounts; so that in making a final footing, the actual expense for support would include much less than in the Connecticut report. It strikes me it would be well to make that modification, and fix a standard of what should be included in this item. I think that clothing and

improvements could be well stated, aside from the expenses of living, in a separate item.

Dr. GUNDRY. I have not very much faith in figures. We all know the saying that "figures will not lie," but, unfortunately, those who use them sometimes do. Unfortunately in the State where I belong, the law requires that we shall give tabular statements. I, therefore, have been obliged to work somewhat under protest. We do not differ very much from this programme submitted by Dr. Jarvis, but there are one or two things which strike me that I will remark upon. I can not see of what use the table giving the residence of patients is. What does it matter whether the man comes from one part of the country or another part? It furnishes no information with respect to the disease, or the influences which may have modified its causes, or the modifications, or the progress. I think it is encumbering the page, and that tables not giving useful information had better be set aside.

In table 2 "form of disease in those admitted," if we are going to bring things down to the uniform standard, it would be well to define the forms of disease we are called upon to give. If we are going to define, what more is necessary than to take the four leading divisions which have prevailed since the days of antiquity. If we are going to enter into all the real pathological modifications, then we should set some limit so as to form results.

Complications have already been explained. There is no table gives rise to so much form as the "disease," there is so much time taking down the form. The patient comes in, and you put down the form. Perhaps that is the only excitement you ever see. On the other hand, you sometimes find that you have got a very excitable patient on your hands. I think it is an exceedingly difficult thing to tabulate so as to give a true idea. In every institution where patients are received at the earliest stages, you will have a preponderance of melancholia. If you do not receive them for several months, and they are subject to poor-house treatment, you will have a majority of cases of mania, in all probability. That condition of things conveys a different impression from what you wish to convey. I think, therefore, that this table should be cut down, as there are four leading divisions. If you are going to varieties, I think you should add an additional table on the natural varieties of disease. "Causes of diseases of those recovered." Unless we have some way of classifying causes, that would lead, in the course of time, to a very long and complicated table, and we would keep adding accordingly. Taking this matter "con-

nected with poverty or privations" how different would be the conclusions of different minds! Take the words "nervous shock" as entered. Why not include it in ill health? "Business anxiety" we would think would be connected with "fluctuations of fortune." "Overstudy," that is an eastern institution; I do not think we are troubled with that. The table, of "death and its causes," I suppose, we all have to keep; but I could suggest that the method adopted elsewhere is more useful, which is simply to make a minute, the same as Dr. DeWolf does in his report of the condition of the patient, and a general statement of the history of each case, and generalities afterwards. I think that would be more satisfactory. The reasons of death will always be a matter of a good deal of liberty in large institutions.

Now comes that financial history; allow me to illustrate how widely the results will differ, and how misleading they will be unless we are careful. Dr. Shew says his report comprehends every expense, as I understand, incurred during the last year. The report covers about the same time that the report does which I have to make, and to cover similar expenses, including improvements; but ordinarily, our State makes an appropriation outside of what are called current expenses. For instance, I have a certain sum for current expenses, and a certain appropriation for putting on a roof, while an institution in the same State has five or six special appropriations; therefore we can not compare two institutions, even in the same State. Then we have large additional appropriations to salaries which are never accounted for, and which never came into the hands of the institution at all to disburse, nor do any of these special appropriations. We are supposed to clothe from the current expenses, while in Indiana they are supposed to pay a certain sum which is in addition, I understand, to their current expenses, so that there will be nothing here except what will be calculated to mislead.

Dr. Parsons. I would like to make an inquiry regarding the result that should be recorded in certain cases of recurrent and of epileptic mania. When admitted they are usually in a state of acute mania. When discharged they are usually rational; that is they are not insane. And yet the diseased condition on which the recurrence of insanity depends, remains substantially the same as at the time of admission. Shall they be discharged as recovered because they present no symptoms of insanity when discharged? Shall they be considered as improved because their condition is in some respects better than at the date of admission? Or shall they

be discharged as unimproved because really there has been no essential change in their condition taken as a whole; that is as including the whole cycle of mania and lucid intervals; or of melancholic mania, and lucid interval.

I would like to make still another inquiry. When a patient is discharged, should the form of insanity on which the result is predicated be that manifested at the date of admission, or should it be the predominating type manifested? Should a case be discharged, as for instance, mania unimproved, because the form of insanity was mania at the date of admission, or should a case of mania at the date of admission be discharged as one of melancholia, or chronic mania, or dementia unimproved, because one of these last was the predominating type of the disease during the residence of the patient at the asylum?

Dr. D. T. Brown. At Bloomingdale Asylum the system of tables recommended by the committee has been followed from time immemorial, though to a limited extent only. The table is a simple one, limited to the general movement of the population. The reasons for this are mainly that the institution is small, averaging only 130 patients, and the fact that most of the families of these patients desire to know as little as possible about the hospital.

Dr. DeWolf. I desire to bring to the notice of the Association a form of Case Book, being a modification of that recently proposed for adoption in England. The Medico-Psychological Association appointed a therapeutical committee for the purpose of taking certain questions relating to the uniform recording of cases of insanity, and to the medical treatment of insanity into consideration. As a member of that Association, I received a copy of the proposed form, with a request for my opinions and suggestions as to its use. In reply I sent a copy of the form now before you, and stated my purpose of bringing it to the notice of this meeting. Dr. Clouston, the secretary of the committee, in his answer, dated Carlisle, April 5, 1871, states: "I do hope that we and our American brethren will be able to work together in this matter of getting up a good case book form. I am strongly convinced that the use of a good form will do much for us in promoting scientific accuracy of mind in ourselves, in our views of the cases treated by us, and also in keeping up our characters as physicians." I lay this, together with the English form, which is almost identical, upon the table, and take the liberty of making further remarks.

PROPOSED CASE BOOK—(ENGLISH.)

NAME — ADMITTED
AGE AND SEX — STATE AS TO MARRIAGE — EDUCATION
WHERE FROM — OCCUPATION — RELIGION

History.

CAUSATION { Previous attacks; Hered. history; Predisposing; Exciting — Where treated; Disposition and habits in health }

DURATION OF DISEASE

FIRST SYMPTOMS { Mental; Bodily }

RECENT SYMPTOMS { Mental; Bodily; Suicidal — Dangerous }

Other facts

State on Admission.

MIND { Exaltation; Depression; Excitement; Enfeeblement; Memory; Coherence; Can answer questions?; Delusions; Other abnormalities }

BODY { Appearance; Color of hair — Color of eyes; Muscularity — Fatness; Nervous System; Reflex action — Pupils; Special Senses — Retina; Lungs; Heart — Pulse; Other organs; Tongue — Appetite; Urine, Sp. gr. — Urinary deposits; Menstruation — Temperature; Height — Weight }

NAME OF DISEASE — GENERAL BODILY STATE

DATE	Temperature		Pulse		Weight.	*Progress of Case.*
	Morn.	Evg.	Morn	Evg.		

Memoranda to be put in Beginning of Case Book.

HISTORY.

Previous Attacks.	Number, character of each.
Hereditary History.	Age of parents, relationship of parents or grand parents, health of same, family diseases or peculiarities—consumption, epilepsy, drunkenness.
Predisposing Causes.	Drunkenness, overwork, character of vocation or habits. Food, tobacco, tea, infantile diseases, adult diseases. Catamenial irregularities, marriage, children, difficult labors, miscarriages, lactation, &c.
Exciting & Proximate Causes.	Disease of brain emotions—blows on the head, drinking bouts, fever, poisons, over-sexual excitement, childbirth.

STATE ON ADMISSION MORE FULLY AND SYSTEMATICALLY ARRANGED.

A.—Bodily Condition.	*a*, Height. *b*, Weight. *c*, Temperature. *d*, Color of hair (baldness). *e*, Muscularity. *f*, Fatness. *g*, Expression of face and general appearance. *h*, Any special injuries or wounds to be noted.
B.—Vegetative Functions.	*a*, Digestive—Tongue, stomach, appetite, condition of bowels. *b*, Dermic—Conditions as to moistness, eruptions, and other abnormalities. *c*, Circulatory—Pulse, cardiac murmurs, flushing of face, or inject. of conjunctiva. *d*, Respiratory—State of lungs, breath, rapidity of respiration. *e*, Glandular—Exam. of urine, state of liver, spleen, thyroid, &c.
C.—Reproductive Functions.	*a*, Abnorm. of penis or testes in men—masturbation, syphilis, &c. *b*, In women—catamenia, discharges, syphili pregnancy, nursing, &c.

D.—NERVOUS SYSTEM.

a, Paralysis, epilepsy, catalepsy, hysteria, and other abnormalities unconnected with the special senses or mental functions.

b, Special senses—

1.—Sight—*a*, Color of iris.
b, Shape and size of pupils.
c, Condition of retina.
d, Vision.
e, Knowledge of color.
f, Hallucinations.
g, Illusions.

2.—Hearing—*a*, External ear.
b, Deafness.
c, Hallucinations.
d, Illusions.

3.—Smell—*a*, Any abnormality of nose.
b, Sense of smell.
c, Hallucinations.
d, Illusions.

4.—Taste—*a*, Sense of.
b, Hallucinations.
c, Illusions.

5.—Touch and Nervous Sensibility—
a, Sense of pain.
b, Reflex action.
c, Hyperæsthesia.
d, Illusions and hallucinations, including those of internal organs.

E.—MENTAL SYMPTOMS, *unconnected with the special senses.*

a, Apparent consciousness.
b, Identity.
c, Attention.
d, Coherence of language.
e, Memory—*a* for recent events, *b* for past ditto.
f, Exaltation or depression of spirits.
g, Excitement of manner.
h, Habits and propensities (filthy, dangerous, suicidal, destructive, indecent, &c.)
i, As to sleep.
j, Delusions—not being hallucinations or illusions.
k, Other abnormalities.

NOVA SCOTIA CASE BOOK.

REGISTERED No. Previous Nos.
Name
Admitted—
Where from
Brought by
Order of
Maintenance
Certificates
Age last Birthday
Sex State as to marriage
Occupation
Natural disposition
Habits in health
Education
Religion
Address of nearest friend

HISTORY.

Age at first attack
First Symptoms { Bodily / Mental
No. and duration of previous attacks
Where treated
Causation { Hereditary History / Predisposing / Exciting
Duration of present attack
Recent Symptoms { Bodily / Mental
Suicidal, and how
Dangerous, and how
Other facts

NAME,

Date.	Temperature.		Pulse.		Weight.	PROGRESS OF CASE.
	Morn.	Even.	Morn.	Even.		

A set of concise and comprehensive tables, including all the data requisite for a fair comparison of results, has long been an acknowledged desideratum.

The appointment, in 1869, of a Statistical Committee of this Association, indicated that the specialty in America were equally solicitous with their English and continental confréres to adopt an uniform mode of recording and tabulating year by year the principal facts of professional significance noted from time to time.

To be of statistical value, these facts must be sufficiently numerous, and should embrace a considerable period of time. No single institution can yield more than a portion of the information required; but every superintendent, how limited soever his sphere of observation, may by combined action contribute very materially to the general fund of knowledge. The only way in which individual effort in this direction can be made available for the general good, is by a mutual agreement to adopt certain specified forms of tables, with an undertaking on our part to prepare these for publication in our annual reports.

It will be in vain for the Association as a body to adopt any set of tables, unless the members individually, or a majority of them, engage to follow the main features of the system that may be agreed upon. The very excellent report of our statistical committee, containing a set of thirty-three (33) clear, and for the most part very brief tables, which are recommended for general adoption, has been circulated among members, and is now open for discussion.

The international tables published in the AMERICAN JOURNAL OF INSANITY are thirty-one (31) in number, and cover a very extensive field of observation and inquiry. They are, however, probably too elaborate for general use. The tables of the Medico-Psychological Association of England number only ten, (10,) and of these there are but three (3) that refer to anything beyond the operations of the year for which the report is given.

By carefully collating these several sets of tables, abridging the more elaborate and simplifying others, it has been found practicable to condense into a series of twenty (20) concise and easily-prepared tables all the information usually given, and perhaps all that may be considered really essential.

The result aimed at in the preparation of these tables, has been to exclude all unnecessary figures, and to avoid repetition; bringing together such facts as have a mutual bearing upon each other. As an instance of what may well be spared in the way of figures,

the third column or total which is commonly given in all tables after the numbers for each sex, may advantageously be omitted from, say four out of every five, not only saving labor in their preparation, but affording a clearer page when printed. See, for instance, tables 5 to 18 inclusive of this series.

One marked dissimilarity between the tables in the reports of the hospitals for the insane of this country, and those adopted in the reports of European asylums, is the absence in the former of any distinction between first admissions and re-admissions. In the international system of tables great stress is laid upon this distinction, many of them having reference solely to patients admitted for the first time; and the want of this separation lessens materially the statistical value of most of the tables published on this continent. Instances have been mentioned where *one* patient has figured *six* times in the recoveries of a single year. If tables are liable to mislead to this extent they become worthless, and the labor spent in their preparation is quite thrown away. Nor is this all; the uncertainty attached to them gives a distaste for statistical research to those who would otherwise avail themselves of the numerical method, and causes a general feeling of distrust to pervade the whole specialty in reference to such tables. The fondness of the members of this branch of the profession for statistical research, as evinced by their publications, has hitherto (perhaps quite accidentally) been for the most part in a relative proportion to the degree of success which has attended their labors as medical superintendents.

It is certainly a matter of commendable pride to be able to exhibit a low rate of mortality, and a high per centage of recoveries; but whether fortunate in this respect or not, there is doubtless in every member of the specialty sufficient "*esprit du corps*" to incline, if not to impel, him to contribute his fair quota of professional information for the benefit of his confréres and successors. If every annual report contained a few compendious tables made upon a systematic plan, so that those of one institution could be fairly compared with those of all the others, the available fund of information would be increased in amount and enhanced in value to those who study statistics, while their labors would be materially lessened without any additional tax upon the time or attention of individual superintendents. Whatever system of tables may be agreed upon, the chief difficulty and trouble in their adoption will be in the first year of their use. Once made out, it will be a comparatively easy matter to keep them up. To show the results of

the operations of any hospital for the whole period since its opening, so that the last report shall include the statistics of every previous report, it is only requisite to introduce an extra column or two into the ordinary tables; and in order to make room for these, the addition of the numbers of the two sexes may well be left to those who seek the information which these tables afford.

Another abridgment which may run through nearly the entire series is effected by uniting all reference to the classes of cases styled "improved" and "stationary," recording only the admissions, recoveries, deaths, and the numbers remaining. By confining the returns to these essential points, it is not difficult to exhibit clearly the operations both of the present, and all previous years in a table of suitable size for publication.

Take, for instance, the table, "duration of disease," No. 14 of this series. What Psychologists wish to know is how long those have been insane who have recovered, how long those who died, and how long those who continue residents of the hospital. Of these, who have been prematurely removed, or have escapede or have been transferred. No special interest is attached to their age, civil condition, residence, or the like. As units they have already been counted among the admissions and discharges, so that beyond this, for *medical purposes* they may safely be ignored. Omitting the addition of the number of the sexes, and leaving out the cases removed otherwise than by recovery or death, ample room is gained to bring into the same tabular form two sets of facts —such as the age and condition as to marriage, combining two ordinary tables in one—and extending the record over the whole period of the operation of the hospital. This applies equally to the table of residence, where an additional column shows the population by last census, and another gives the average distance from hospital. So in the table of causes space is thus left to enter the complications.

The series now presented as an abridgment and modification of the American and International tables will be found to cover all the facts of any statistical value which those contain, and particularly as regards the patients remaining under care at the close of the year, this information will be found to be more full and detailed than in any tables yet published. When a professional inquirer ascertains, as he can readily do from the last column of each table, the age on admission, the present age, the number of attacks, the form of the disease and its complications, the cause of insanity, the duration of treatment, with many other particulars relative to

those remaining in hospital at the end of the year, he can form a more correct estimate of their condition and prospects than by the arbitrary division of all into two classes, curable and incurable.

In the column alone referring to those remaining has it been thought requisite to give the total of whatever condition,—and even here it might be omitted.

In submitting these twenty (20) tables for the consideration of the Association, no disparagement is intended toward any other series. They are thought to contain as full and complete information as a majority of the members of the specialty will agree to compile for publication. The first four are from the tables of the Medico-Psychological Association, with the transfer of the "summary" from table four to table two. The other tables of that Association have been altered to supply an obvious deficiency by embracing the operations of all previous years.

Table seven (7) of the English series, taken from Dr. Thurnam's work on Asylum Statistics, might, perhaps, be advantageously substituted for numbers thirteen and fourteen of this series, additional columns being introduced to indicate the results of all former years. This table refers to the duration of insanity previous to admission, and the number of previous attacks, dividing all into four classes. As although familiar to many members of this Association, it may not be known to all, it is added to the present series as an alternative table for examination and comparison.

The whole series, indeed, is offered with a view to elicit a full expression of opinion as to what amount of information every medical superintendent should feel himself bound to contribute to the general stock, and further, in what form it can be most easily tabulated, and most clearly understood.

TABLES.

1. Admissions and General Results for the Year.
2. Admissions and Discharges from opening of Hospital.
3. Operations of Hospital Year by Year.
4. History of Annual Admissions.
5. Age and Condition as to Marriage of all Admitted, Recovered, Died, and Remaining.

6. Nativity of all Admitted, Recovered, Died, and Remaining.
7. Residence " " " "
8. Occupation " " " "
9. Maintenance " " " "
10. Causes of Insanity " " " "
11. Form of Disease " " " "
12. Age and Condition as to Marriage *at first attack* of all Admitted, Recovered, Died, and Remaining.
13. Number of previous attacks and duration of disease before admission, of all Admitted, Recovered, Died, and Remaining.
14. Duration of Insanity, before Admission, in all &c., &c.
15. Months of Admission, Recovery, and Death.
16. Duration of Treatment, Recovery, Death, and Remaining.
17. Whole duration of Disease, Recovery, Death, and Remaining.
18. Causes of Death Year by Year.
19. Annual Expenditures and Average.
20. Annual Receipts.

TABLE 1.

Admissions and General Results for the year 1870.

	M.	F.	T.	Males.	Females.	Both Sexes.
In Hospital, January 1, 1870,.....						
First Admissions,.....						
Re-admissions,.....						
Total Admitted,.....						
Present during the year,.....						
Discharged or Removed,.....						
Recovered,.....						
Improved,.....						
Stationary,.....						
Died,.....						
Total Discharged and Died during the year,....						
Remaining December 31, 1870, inclusive of males, and females absent on trial,....						
Average No. resident during the year,.....						

TABLE 2.

Admissions and Discharges from the opening of the Hospital, 18 *to December* 31, 1870.

	M.	F.	T.	Males.	Females.	Both Sexes.
First Admissions, ...						
Re-admissions, ...						
Total Admitted, ...						
Discharged or Removed, ...						
	M.	F.	T.			
Recovered, ...						
Improved, ...						
Stationary, ...						
Died, ...						
Total Discharged and Died during years, ..						
Remaining December 31, 1870, ...						
Average of years, ...						

SUMMARY OF TOTAL ADMISSIONS.

Per centage of Cases Recovered, ...						
" " " Improved, ...						
" " " Stationary, ...						
" " " Died, ...						
" " " Remaining, ...						

TABLE 3.

Operations of Hospital year by year, from 18 *to December* 31, 1870, *with Yearly Average, and per centage of Recoveries and Deaths.*

YEAR	ADMITTED.			DISCHARGED.												Remaining 31st Dec. in each year.			Average Number Resident.			Per centage of Recoveries on admissions.			Per centage of deaths on average No's resident.		
				Recovered.			Improved.			Stationary.			Died.														
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.

TABLE 4.

History of Annual Admissions from 18 *to December* 31, 1870.

YEAR.	ADMITTED.					OF EACH YEAR'S FIRST ADMISSIONS, DISCHARED AND DIED IN 1870.												TOTAL DISCHARGED AND DIED OF EACH YEAR'S ADMISSIONS, TO DEC. 31, 1870.												REMAINING OF EACH YEAR'S ADMISSIONS DEC. 31, 1870.		
	New Cases.		Relapse Cases.		Total.	Recovered.			Improved.			Stationary.			Died.			Recovered.			Improved.			Stationary.			Died.					
	M.	F.	M.	F.	M. & F.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Total.....																														

TABLE 5.

Age and Condition as to Marriage of those Admitted. Recovered and Died from 18 *to December* 31, 1870, *and of those Remaining.*

Age on Admission, Recovery and Death.	Marital Condition.	1870.						18 to 1870.						Remaining December 31, 1871.		
		Admitted.		Recovered.		Died.		Admitted.		Recovered.		Died.				
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	T.
Under 10 years,																
From 10 to 15 years,																
From 15 to 20 years,	S.															
	M.															
	W.															
From 20 to 25 years,	S.															
	M.															
	W.															
From 25 to 30 years,	S.															
	M.															
	W.															
From 30 to 40 years,	S.															
	M.															
	W.															
From 40 to 50 years,																
Re-admissions,																
Unknown,																
Total,																

TABLE 6.

Nativity of those Admitted, Recovered, Died, and Remaining.

COUNTRY.	1870.						18 to 1870.						Remaining December 31, 1870.		
	Admitted.		Recovered.		Died.		Admitted.		Recovered.		Died.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Re-admissions, ...															
Total, ...															

TABLE 7.

Residence of those Admitted, Recovered, Died, and Remaining.

PROVINCE, STATE, or COUNTY.	Population Census 18	Average Distance from Hospital.	1870.						18 to 1870.						Remaining December 1, 1870.		
			Admitted.		Recov'd.		Died.		Admitted.		Recov'd.		Died.				
			M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Total, ...																	
From Cities of over 5,000 Inhabitants, ...																	
From Towns of less than 5,000 Inhabitants, ...																	
From Country Districts, ...																	

TABLE 8.

Occupation of those Admitted, Recovered, Died, and Remaining.

	CENSUS.	1870.						18 to 1870.						Remaining December 31, 1870.		
		Admitted.		Recovered.		Died.		Admitted.		Recovered.		Died.				
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.

TABLE 9.

Maintenance of those Admitted, Recovered, Died, and Remaining.

HOW SUPPORTED.	1870.						18 to 1870.						Remaining December 31, 1870.		
	Admitted.		Recovered.		Died.		Admitted.		Recovered.		Died.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Own Means,															
By Friends,															
By Brown Fund,															
By County of Kings,															
By County of Hants,															
By Province,															
Transferred from															
to															
Re-admissions,															
Total,															

TABLE 10.

Causes of Insanity in those Admitted, Recovered, Died, and Remaining.

SUPPOSED CAUSES.	1870.						18 to 1870.						Remaining December 31, 1870.		
	Admitted.		Recovered.		Died.		Admitted.		Recovered.		Died.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Physical,															
Moral,															
Not Ascertained,															
Total,															

TABLE 11.

Form of Disease in those Admitted, Recovered, Died, and Remaining.

FORM OF INSANITY AND COMPLICATION, ON ADMISSION.	1870.						18 to 1870.						Remaining December 31, 1870.		
	Admitted.		Recovered.		Died.		Admitted.		Recovered.		Died.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	T.
Simple Insanity,.....															
Epileptic,.....															
Paralytic, ...															
Senile Dementia,.....															
Organic Dementia,.....															
Idiocy,.....															
Total,.....															

TABLE 12.

Age and Condition as to Marriage at first attack of those Admitted, Recovered, Died, and Remaining.

AGE AT FIRST ATTACK.	Condition as to Marriage.	1870.						18 to 1870.						Remaining December 31, 1870.		
		Admitted.		Recovered.		Died.		Admitted.		Recovered.		Died.				
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	T.
Under 5 years,...	S. M. W.															
From 5 to 10 years																
" 10 to 15 "																
" 15 to 20 "																
Total,.....																

TABLE 13.

Number of Previous Attacks, and Duration of Disease before Admission in those Admitted, Recovered, Died, and Remaining.

No. of Attack and Duration of Insanity before Admission.	1870.						18 to 1870.						Remaining December 31, 1870.		
	Admitted.		Recovered.		Died.		Admitted.		Recovered.		Died.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	T.
1st attack within 3 mos.,															
" from 3 to 6 "															
" " 6 " 12 "															
" " 1 " 2 years															
" over 2 years,.....															
2d attack within 1 year,															
" " " 1 to 2 yrs.,															
" " over 2 years,															
Third Attack,.....															
Fourth Attack,.....															
Uncertain, ...															
Total,.....															

TABLE 14.

Duration of Disease before Admission in those Admitted, Recovered, Died, and Remaining.

DURATION OF INSANITY ON ADMISSION.	1870.						18 to 1870.						Remaining December 31, 1870.		
	Admitted.		Recovered.		Died.		Admitted.		Recovered.		Died.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Under 1 Month,															
From 1 to 3 Months,															
" 3 to 6 "															
" 6 to 9 "															
" 9 to 12 "															
" 12 to 18 "															
" 18 to 24 "															
" 2 to 3 Years,															
" 3 to 4 "															
" 4 to 5 "															
Uncertain,															
Total,															

TABLE 15.

Months of Admission, Recovery, and of Death.

MONTHS.	1870.						18 to 1870.						Remaining at end of each Month, 1870.		
	Admitted.		Recovered.		Died.		Admitted.		Recovered.		Died.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
January,															
February,															
March,															
First Quarter,															
April,															
May,															
June,															
Second Quarter,															
July,															
August,															
September,															
Third Quarter,															
October,															
November,															
December,															
Fourth Quarter,															
Total,															

TABLE 16.

Duration of Treatment of those Recovered, Died, and Remaining.

HOSPITAL RESIDENCE.	1870.				18 TO 1870.				REMAINING DEC. 31, 1870.		
	Recov'd.		Died.		Recov'd.		Died.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	T.
Under 1 month,.....											
From 2 to 3 mos.,..											
" 3 to 6 " ..											
" 6 to 9 " ..											
" 9 to 12 " ..											
" 12 to 18 " ..											
" 18 to 24 " ..											
" 1 to 3 years,..											
" 3 to 4 " ..											
" 4 to 5 " ..											

FROM 18 TO 1870, YEARS.

	Recovered.			Died.			Remaining.		
	Y.	M.	D.	Y.	M.	D.	Y.	M.	D.
Average of all cases. M.									
F.									
T.									

TABLE 17.

Whole duration of disease in those Recovered, Died, and Remaining.

WHOLE DURATION OF INSANITY.	1870.				18 TO 1870.				REMAINING DEC. 31, 1870.		
	Recov'd.		Died.		Recov'd.		Died.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	T.
Under 1 month,.....											
From 1 to 2 mos.,..											
" 2 to 3 " ..											
" 3 to 6 " ..											
" 6 to 12 " ..											
" 1 to 2 years,..											
" 2 to 3 " ..											
" 3 to 4 " ..											
Total.....											

TABLE 18.

Causes of Deaths, from 18 *to* 1870.

CAUSES.	1845 to 1855.	1856 to 1866.	1867.	1868.	1869.	1870.	Total.
Cerebral or Spinal Disease,							
Thoracic Disease,							
Abdominal Disease,							
Exanthemata,							
Erysipelas,							
General Debility and Old Age,							
Accidents,							
Suicide,							
Total,							

TABLE 19.

Annual Expenditure and Average.

	1870.	Weekly Average.	Mean of — Years.
FOOD, Meat,			
Flour,			
Groceries,			
Vegetables,			
Sundries,			
Clothing,			
Salaries and Wages,			
Medicines,			
Furniture,			
Fuel and Light,			
Incidentals,			
Average per patient, weekly,			
Average per patient, per annum,			
Repairs,			
Insurance,			
Farm Stock and Fodder,			
Total, $			

TABLE 20.

Annual Receipts from all Sources.

	1870.		18 to 1870.	
Board of Private Patients @.....				
" " " @.....				
" Indigent " @.....				
County of Kings,.....				
" " Colchester,.....				
" " Pictra,.....				
" " Cumberland,.....				
District of.....				
Legacies,.....				
Donations,.....				
Sale of Farm Stock,.....				
Sale of Sundries,.....				
Interest on Investments,.....				
" " "				
State or Province,.....				
Total,.....$				

TABLE 7, OF THE MEDICO PSYCHOLOGICAL SERIES.

(DR. THURNAM'S TABLE.)

Extended to embrace the operations of previous years. To replace tables 13 and 14 of this series.

CLASS.	Duration of Disease on Admission in Four Classes.														
	1870.						18 to 1870.						Remaining December 31, 1870.		
	Admitted.		Recovered.		Died.		Admitted.		Recovered.		Died.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	T.
FIRST CLASS. First attack, and within three months on admission,.....															
SECOND CLASS. First attack, above three and within twelve months on admission,.....															
THIRD CLASS. Not first attack, and within twelve mos. on admission,.....															
FOURTH CLASS. First attack or not, but of more than twelve months on admission,.....															
Uncertain,.....															
Total,.....															

Dr. WADDELL. I began my work in the specialty with the feeling that statistics of our institutions were not of much scientific value, and I have not much confidence in them now. The institution that I represent admits all patients that are sent of all classes, including the epileptic and paralytic, the idiot and imbecile, and they remain, if not restored or partially so, till they die, and there is no other receptacle in the Province in which lunatics of any class are kept. In the institutions in the United States, from the reports of which the general results of treatment of the insane would be drawn, there are only a part of the insane of the country —thousands of their number being in county and alms-houses; it is manifest, therefore, that the result of the treatment in the institutions of the United States and in that of New Brunswick could not at all harmonize, and the blending of their figures would only tend to vitiate the whole.

To compare the statistics in connection with the insane of different countries for the purpose of arriving at correct results, all the insane should be included; and to compare institutions with one another for a similar purpose, the same classes and forms of disease should be compared. In county and alms-houses where supposed incurables are kept, many of whom have been recovered from the institutions for the insane, the rate of cures is very low, and the rate of mortality correspondingly high, and to arrive at a correct result regarding the recoveries and deaths in the country, these rates and the rates that the reports of institutions for the insane furnish, should be averaged.

My friend, Dr. DeWolf, has had but part of the insane of Nova Scotia at any time under his charge, and for years comparatively but a small number; his reports, therefore, give the result of treatment, &c., for the patients in the institution. My reports exhibit the same thing for all, or nearly all, the patients in New Brunswick.

Again, different persons, judging from the same symptoms, may arrive at altogether different conclusions regarding the causes of disease, and in the same way may differ as to the causes of death, and so on as regards other things with which statistics are concerned. It is sometimes very perplexing to fix on the real cause of death, there being influences so multifarious, all tending to produce it. On the whole, I can not see that much good is to be gained in any way by statistics as at present made up, and especially by numerous and complicated tables.

Dr. COMPTON. I have few or no suggestions to make as to the

kind of tables we should have in our reports, especially in the presence of the great statistician, Dr. Jarvis; but if statistics are understood to be the embodiment of those that have gone before us, as well as the older members of the specialty who are with us, I think their value can not well be estimated, for they are drawn upon by Superintendents in the United States, British America and the other continent. Inasmuch as some fault has been found, perhaps it would be as well to recommit the subject, and add a member to the committee; let the committee be continued and report at the close of the next meeting. I would like to see uniformity, especially in the statistics of our institutions, and I would also like to have the landmarks laid down for me.

Dr. Everts. I shall accept whatever forms of tabulation may be recommended by this Association, and comply with them mechanically. If there is any one thing which I have less talent for than another, it is statistics. If there is any one source of information from which I derive less knowledge than another, it is statistical tables. If we attempt by uniformity to render our statistics more useful, we should also require uniformity of education and thought as observers. We do not agree as to causes, or nomenclature, or characteristics of disease. Thus the same form of disease may be classified by different observers under different heads. There are, in fact, so many sources of error vitiating the purity of statistics in all such unfixed matters as we have to deal with in this specialty, that it is difficult to derive much that is reliable from them. I can not illustrate the imperfection to which such statistics are liable better than by relating a circumstance which came under my own observation. In coming from Fortress Monroe to Point Lookout Hospital, during the war, on a hospital steamer, several soldiers died on the passage. On arriving at the hospital, the bodies were carried off the boat and laid on the wharf. No one knew when they died, or how. The Assistant Surgeon, in charge of the General Hospital, with a steward and record book, came out and viewed the bodies. The steward was a German, speaking English badly. He opened his book, with the printed forms furnished from the Surgeon General's office, and remarked to the medical officer, "What for I say this man die mit?" I say he die mit rheumatisms?" "O, no." "I say he die mit typhoid febers? he must die by dem regulation." And I suppose that it was so recorded for the benefit of the Army Medical Bureau.

Dr. Jarvis. If we wait until we have perfect methodical demonstration upon every point, or any point in respect to the founda-

tion of our statements concerning disease, we should never derive any advantage from any body's experience, but every one would have to grope his own way. The advances in relation to the vital system have not been anything like those in astronomy, railroads, commerce or engineering; but we can take up where the last has left off. That is the best we can do, and that is the best the world has done. Upon this the medical man bases his own plans, and from those in whom he has confidence he gains enlarged ideas and uses them in practice. That is the way we have improved from our earliest experience to the present. We thus make advancements. You will make books, and good books, which will be profitable to each one of you, and you will get books based upon these tables, and make progress for all time; until in the course of ages,—it may be a thousand years,—they will come to that perfection in these matters so much desired. With what information we have, let us do the best we can; because we may have but one talent, is no reason why we should bury that in the earth, and say at last, "We knew we could not tell a perfect tale, and therefore we said nothing." There are, of course, different causes, and we can not get perfection, any more than we can get perfection out of our own reasoning. We can make advancement in the progress of disease, although there are some causes very vague. Some Superintendents whom I know, and I doubt not all, record all the facts they can learn from the friends of the patients as to the causes of the malady; but afterwards they have other and more satisfactory information by which they correct the record, and present very different and more rational explanations of the origin of the disease.

The influence of the location of a hospital upon its use by the people, is a remarkable instance of the importance of taking wide surveys and gathering the experience of many institutions in as great a number of states as possible.

There was once a great ambition of states and governments—it is not extinguished now—to have great, grand, magnificent hospitals in the centre of their territory, where they could gather a multitude of lunatics—all that were in their domain. But the thorough analysis of their population and counties, and comparison of the number of patients which they respectively sent to the central institution, showed that this was all a delusion. The near people sent many, but the remote people sent few. The government of the State of New York caused an examination of all the States and all the hospitals of the country for this purpose. The re-

port was published in 1866. It was found that the counties nearest to hospitals sent three to nine times as many as those that were the most distant, according to their population in the various States: in Massachusetts two or three times as many, and in one of the Carolinas nine times. The result from a very careful calculation was that from the beginning of the hospital to the time the report was published, just in proportion as the counties were distant from the hospital, they diminished their use of it. In different States in proportion to their hospitals, the counties nearly had this proportion of 2, 3, 4, or 5. That was a lesson. It showed that a State could not put up one grand hospital, near its centre, with any expectation that all the people would enjoy its advantages equally. If these advantages are to be enjoyed by all the people in the State, they will have to carry their hospitals to their neighborhood. These figures give a lesson that ought to be taught to each legislator, so that all the people shall find a hospital within their reach where their insane may be carried.

Dr. RAY. It would seem at first blush that the form of disease would be a very suitable subject for inquiry—that it might throw some light on the final result. But the difficulty is that no two persons probably would agree upon the requisite distinction. Here we have in this table, "acute mania, homicidal mania, suicidal mania, periodical mania." Now what are we to do with cases that are both acute and periodical, and how many attacks are required to constitute a periodical case? Two, three, four or five? So, too, mania may be both suicidal and acute or chronic, and no particular form continues through the whole course of the disease. Then here is monomania and melancholia. How are they to be distinguished from each other? The two terms were once applied to the same form of disease, and I doubt if there is much agreement yet as to the exact meaning of monomania. No man can be sure when he speaks of a certain form of insanity, that he means by it precisely what everybody else does. There might be a difference of opinion as to the exact form to which a certain case should be referred, and that would make the statistics utterly useless. I notice a table here under the heading of "Death and the Causes." I have no hesitation in saying, and I think the statement must be confirmed by most of the gentlemen present, that any doctrine as to the causes of death founded on this table can be of little worth, for the simple reason that a large portion of the cases are not examined after death. Nothing but a post mortem examination can make us quite sure of the lesions produced by disease. If you

mean to rest the use of statistics on the doctrine of approximation, meaning thereby that we approach the truth by reducing error to its minimum extent, I can only say, I am not prepared to believe that two errors or any number of errors can make one fact. It is very common, in this class of tables, to see a number of cases put down, "exhaustion from mania." I am at a loss to know what form of disease is meant by that term. If it refers to what is called "acute delirious mania," which comes on suddenly, runs its course rapidly, and the patient dies, I much question the correctness of the term, because it is equally applicable to the termination of chronic mania. Is it not very much like saying that a man dies "for want of breath?" But it conveys the wrong impression. "Exhaustion" implies a loss of muscular power; but patients who die in acute mania may evince an extraordinary degree of muscular power up to the very last. Even were it otherwise, it would not be very sound pathology to regard the exhaustion as the cause of death. We do not say when a person dies of consumption, that he dies of exhaustion from consumption, however much he may be exhausted, but from consumption. I observe that three cases here are attributed to strangulation. As to what kind of strangulation is here meant, we are left in doubt. Persons are sometimes strangled by food lodging in the œsophagus, and sometimes by intentional suspension. If it means the latter, I can only say that it is a very roundabout expression for the fact. It reminds one of the reply of the man when asked about the death of his brother, who died by the hands of the hangman, "He fell suddenly from an elevated position." I will not take up the time of the Association any longer. It is enough to say that these tables confirm the generalization that must always be urged against statistics concerning facts which may or may not be true, and opinions which may or may not be unquestioned.

Dr. Workman. I was not present at the reading of the paper, and therefore am not qualified to express any opinion on its merits. I think I am inclined to agree with Dr. Ray. If I could see the use or the practical result of the compilation of these tables, then I would be willing to undertake the labor involved in them. It certainly is understood by the whole of us that we have enough to take up our time in other labor than this. I say unless the head of the establishment does this labor himself, it must be imperfectly and obscurely done. The Superintendent must himself work on these tables. I think in the compilation of these forty tables, we should lose an amount of labor worth over two months of the whole

year. I ask whether this time should be lost to our patients? Show me instead the practical result of our treatment, or a better understanding of the pathology of their cases. If we spent half of this time in the wards amongst our patients, conversing with them and doing the best we can in regard to their moral treatment, it would be well bestowed. Again, I have found I can not be in two places at once. I have myself thought I could do best by treating this work as so much buncombe, and going no farther than I was compelled to go. How many of the readers of the tables understand them at all? I have often been embarrassed, sometimes disgusted, by remarks appearing in the newspaper press upon my statistics. So far from tending to do any good at all, they only tend to discolor the whole subject. Instead of giving that table of causes of death, why not merely give an analysis of autopsical examinations; and if we have thoroughly explored the causes of them, we might throw some light on the pathology. But even here there is a difficulty: for after you have made a post mortem examination, you find it almost impossible to express the real cause of death in tabular form, because you have more than half a dozen various causes. Suppose in a case of ordinary consumption the patient has undergone attacks of hectic fever, and diarrhœa, and finally sinks within thirty-six hours; is not the diarrhœa the last form of disease before death? And yet it is only one of the late phenomena of the disease,—the real cause has been the destruction of the lungs. Again, turn to tubercular disease generally: the disease may exist in various organs. How as to the table in which you introduce half a dozen of these causes, unless you give the whole of them, and a rational summarization, how are we to draw any intelligible result from it? I have given the subject a great deal of thought, and am convinced if the requirement of statistics was abolished entirely, and it was left to good sense and industry to present such facts as we know for certain will be of real value in imparting correct knowledge of the nature of insanity, its physical associations and the results of treatment, then we would confer a great benefit upon the insane world. I look upon the compilation of these papers as an incubus. I have known in past experience a member of our Board taking up my statistics, and making use of the figures in direct opposition to the facts. I think it was Joseph Hume who said, "You can make anything out of figures, if you spread them and manipulate them according to your own conceived notions." I do not feel inclined to go further, because I have given my views in numerous reports and papers which many here present have seen.

Dr. JARVIS. Some years ago I was with my friend Dr. Bell, whom we all remember with great respect and love, and who had great confidence in our friend Dr. Ray. Dr. Bell told me, with a good deal of satisfaction, that during a recent visit to him, Dr. Ray spoke of some new method of treating a form of mental disorder. Dr. Ray is a very careful observer and cautious reasoner. He acts upon no uncertain data. When he forms his opinion in regard to any method of treatment, he summons the events of his experience before his mental eye, and analyzes these into causes and consequences, and determines the power of the former and the relation of the latter. He does not count exactly, and say to himself there were twenty-three cases, of which twenty or twenty-one or twenty-two had the same result, and one, two or three terminated otherwise; therefore the former must be accepted as the legitimate consequence of the means that were used. Yet he taxes his memory, which is excellent, better than belongs to most, and finds that, in general, a majority of the cases with a definite treatment had a similar determination, and this he takes as the guide of future action. All physicians act upon similar principles with varying extent of experience, and various degrees of accuracy, in their observations and deductions. The difference between this and the statistical method is, that the latter demands an exact record of all the primary facts, and moreover it adds to any one's personal experience the facts and observation of others who have wrought in the same field. This applies to all the facts connected with insanity which are or may be matters of record, and which are usually stated in hospital reports. We can bring all the experience of all the hospitals to bear upon and illustrate any point, and be guides for all, and we may present all these facts in such uniform manner in the reports that all who examine any topic referred to in them may derive unmistakable benefit.

I am well aware that medical and pathological language is not always exact, and that all men do not always mean precisely the same thing by the same words, especially in the designation of human ailments. The terms melancholia, mania, fever, consumption, do not convey a meaning as precisely definite as terms in exact science, as inch, foot, ounce, pound, &c. Yet they are as exact as many of the terms used in the common affairs of life, and if we were to refuse to use these terms, either orally or in writing or printing, until all should understand them alike, conveying and receiving exactly the same ideas by their use, a large part of our business and intercourse would stop. Yet we are continually us-

ing these vague terms; people understand them and transact their business with them, and nobody is mistaken or defrauded.

So in case of these tables of mental diseases, or the circumstances connected with it, or its results. The readers understand what is meant by the language; none are misled, but all are enabled to study the science with more satisfaction and advantage.

Dr. SHEW. While endeavoring to prepare our report in accordance with the form of statistical tables recommended by the committee, we were met by the same objections that have been raised here to-day. A few of the tables required considerable time and labor; but the one that really gave us the least trouble of all, I was surprised to find, is the one that Dr. Ray objects to as being unreliable in nearly all respects. I refer to the table of death and the causes. It probably gave us the least trouble from the fact that our institution has a regular pathologist, whose duty it is to make thorough autopsies of all important or doubtful cases. You will find this table given in our report with only five cases under the heading, "undetermined." Nearly all of our patients are from the poorer classes, and yet we seldom meet with objection on the part of friends. I make it a rule, when a patient is admitted, to ask permission to have a post mortem examination in case of death. Usually it is granted without hesitation; sometimes they wish to confer with their friends or the priest. In nearly all of these cases we subsequently receive the desired permission, and a record to that effect is made in the case book.

We have introduced this year a pathological report—I think for the first time in institutions of this kind. The report of the pathologist gives a history of two cases, and the microscopical examinations. One of these cases appears upon our books simply as a case of mania—one of a thousand of similar cases which would attract no unusual attention during life, and yet after death we found most interesting lesions, so interesting in fact that plates representing the microscopical appearances have been prepared for publication in some of the medical journals. This practice, if continued from year to year, will in the end make our reports valuable. I have often been asked by physicians why the reports of institutions for the insane do not contain the same kind of facts as reports of general hospitals. "Why can we not learn something from them in regard to insanity, and the treatment of this disease, or in regard to the causes of death? Why wait until progress has been made?" they say. Of what interest to us is the report of the fact that you use three brooms in one hall in the month of January, and

two pieces of soap in another; that is not what we want, but something about the treatment of insanity and the results.

Dr. KIRKBRIDE. Are annual reports proper places for these pathological reports? It seems to me they belong to medical journals; but I think, in our Legislature, they would not be accepted as in a proper position.

Dr. SHEW. Our reports are called for by act of the Legislature —not alone for the Legislature, but also for the profession. To promulgate enlightened views respecting insanity is the main object of the reports. They are made to the Legislature, but with a view of giving information to its members and the profession.

Dr. KIRKBRIDE. And the people of the State?

Dr. SHEW. We circulate our reports among the people. One copy is sent to every physician, every civil officer, and every member of the Legislature of the State. But our reports are not kept for the general public and visitors to the institution. I think in a majority of cases even reporters of newspapers and visitors are more apt to receive erroneous impressions from the reports than otherwise.

Dr. WALKER. What value does the Doctor attach to that pathological report in cases of ordinary insanity? He says it did not differ from hundreds in which he found microscopic traces of lesions.

Dr. SHEW. It is very interesting to know what these lesions are. This case would have been diagnosed by all physicians simply as a case of mania; and had the autopsical examination been made without the aid of a microscope, these lesions would not have been discovered.

Dr. WALKER. Because important lesions were found in this case, are we to be looking for them in all cases?

Dr. SHEW. I believe that by a careful study of these cases, we shall in time be able to classify them, and recognize their diagnostic symptoms during life. For this reason I requested the appointment of a pathologist.

Dr. WALKER. I am not speaking of that particular case in a carping spirit. It seems to me to be one of those exceptional cases, and after all teaches nothing to the practitioner. I know that in a great mass of these observations, there will be very instructive lessons taught. This seems to be singled out as an extraordinary case.

Dr. SHEW. The point that I wished to make was simply this; that in a series of years these pathological studies, carefully made, will enable us to make greater progress than heretofore.

Dr. GUNDRY. Is this report furnished by order of the Legislature?

Dr. SHEW. Yes, sir.

Dr. GUNDRY. Do not the members have a certain number of copies for their own distribution?

Dr. SHEW. Three hundred copies are sent to the Legislature. More can be had if called for.

Dr. GUNDRY. Does it not get to be a public document?

Dr. SHEW. Yes, sir; we have in our State two hundred and thirty-five members of the Legislature, and they have never required us to send over five hundred copies to the department.

Dr. KIRKBRIDE. Are the members of the Legislature at all competent to appreciate the results of the pathology?

Dr. SHEW. Very few.

Dr. WORKMAN. Are the members competent to read the reports at all?

Dr. SHEW. They certainly would not allow us to make a special report for physicians, and another report for general circulation.

Dr. KIRKBRIDE. Could not the medical report be circulated in the medical journals? I do not wish to undervalue the labors of pathologists. I appreciate them. I think it would be better to publish these reports in medical journals than in a pamphlet for public circulation.

Dr. SHEW. It has always seemed to me that the report of a State hospital should be for public distribution. We have changed the name of institutions for the insane and now you hardly ever find the word asylum given to a new institution. I suppose that this change has been made by the advance of science; in view of the fact that we claim that insanity is a curable disease in a majority of cases, and therefore the word Hospital is the proper name. I can not see why a hospital for the insane should be different from a general hospital.

Dr. KIRKBRIDE. My report is to the Board of Managers who are not professional men, and do not appreciate such a report. It shows the general operations of the institution and gives the kind of information which I think it is important to communicate. That is the distinction I would make,—the medical for medical journals.

Dr. SHEW. You make such a report to your board as they require; but it seems to me that the State hospitals should try to meet the wants of the profession, of the State, and of the community. I think one mistake that has been made in the past, and one reason why our public institutions for the insane are in many vicinities

looked upon with distrust,—(you will recognize that it is so among the ignorant people particularly) is that you have tried to secrete or keep back important facts from the people. I believe that the more generally these important facts are disseminated, the more generally our hospitals will be supported and maintained.

Dr. KIRKBRIDE. I hope I shall not be misunderstood by my friend Dr. Shew. I approve fully of the views expressed in regard to these pathological investigations, but I believe that the results ought to be given to the medical profession through the medium of the medical journals rather than in our annual reports. These latter have always seemed to be intended more especially for the public than for the medical profession, and if so there are obvious reasons why these details of pathological investigations had better be published in the professional journals. I approve entirely of the publication of hospital reports. Instead of 300 I should think 3,000 a desirable number. I appreciate most fully the labors of the gentlemen who are devoting themselves to these pathological investigations. I know how much labor it involves, having, for many years, investigated thoroughly every case where proper permission could be obtained. It was made the exception rather than the rule afterwards, on account of the labor required and the want of a special pathologist.

Dr. DE WOLF. The object of reports of hospitals for the insane is two-fold; first, to inspire confidence in its management by giving the fullest information as to the mode in which the institution is conducted, and the second (and equally important) object is the accumulation of facts of professional interest for scientific purposes. Hence the numerous tables in every report. The report which I hold in my hand of the Cumberland and Westmoreland Asylum contains a medical appendix,—a plan which might well be adopted in all our reports. We could have two editions, one omitting the statistical tables which are of no general interest whatever, and another with these tables and such matters of professional moment as we might not wish to publish for the general reader.

Dr. GUNDRY. The Doctor is probably not aware that the reports when published by order of the Legislature are sometimes taken out of the hands of the superintendent. In the western States the reports are published pretty generally in that way. We send the report to all physicians, of course, and there are certain other people you can not well refuse to give it to. Now there is a large class of people into whose hands it is just as well not to put the report. In some places a report is offensive. I think it would

not be well for friends who are going to send to a hospital persons near and dear to them to look over a pathological report. I admit the value of pathology. I am glad that it has been introduced in hospitals where they can get it. I think it is a step in the right direction. I do not wish to be understood as discouraging these men in the least. All I contend for, is on the principle of the man at the hotel who desired that his butter and the hairs should be brought in on two plates.

Dr. CURWEN. I move that the report be adopted as the basis of the reports of the different institutions in this country.

After discussion as to the particular wording of the resolution, it was finally seconded and agreed to as follows:

Resolved, That the report of the committee be recommended as the basis on which the different statistics of the hospitals be made.

Dr. KIRKBRIDE. At the last meeting of the Association a committee consisting of Drs. Walker, Everts and myself were appointed upon the subject of Didactic and Clinical Instruction in Insanity. The committee have conferred together and do not propose to give any lengthy report, but instead, simply to submit three resolutions which I will now read.

Resolved, That in view of the frequency of mental disorders among all classes and descriptions of people, and in recognition of the fact that the first care of nearly all these cases necessarily devolves upon physicians engaged in general practice, and this at a period when sound views of the disease and judicious modes of treatment are specially important,—it is the unanimous opinion of this Association that in every school conferring medical degrees, there should be delivered, by competent professors, a complete course of lectures on insanity and on medical jurisprudence, as connected with disorders of the mind.

Resolved, That these courses of lectures should be delivered before all the students attending these schools; and that no one should be allowed to graduate without as thorough an examination on these subjects as on the other branches taught in the schools.

Resolved, That in connection with these lectures, whenever practicable, there should be clinical instruction, so arranged that, while giving the student practical illustrations of the different forms of insanity and the effects of treatment, should in no way be detrimental to the patients.

Dr. KIRKBRIDE. In reference to this matter of didactic and clinical instruction in cases of insanity, I may say, that it is not a new one. Both were given in Philadelphia long since,—as far back as the time of the distinguished Dr. Benjamin Rush. He gave lectures on insanity, in the University of Pennsylvania, at which he was a professor, and he took his class around with him, and lectured on the cases of insanity in the Pennsylvania Hospital, of which he was one of the attending physicians. Making proper allowance for the knowledge and the views of that day, I do not doubt that these two courses of lectures combined were about as complete as anything we have had in this way. As you all know, courses of lectures on insanity have quite recently been delivered in the Medical Department of Harvard University by Dr. J. E. Tyler, in one of the New York colleges by Dr. D. T. Brown, and in Philadelphia by Dr. Isaac Ray; but in at least one of these there was the radical defect, that it it was only a summer course; was listened to by only a small portion of the students, and that the students were not examined on the subject when applying for their medical degrees. Lectures on insanity clearly ought to be a part of the regular winter course, and students should be as carefully examined on this subject as on any other branch of medicine, before commencing the practice of their profession. The resolutions which I have just read are brief, but they seemed to the committee to be about all that was required to express the views of the Association.

The resolutions were unanimously adopted.

On motion, it was

Resolved, That a copy of these resolutions be sent by the Secretary to the American Medical Association, the Dominion Association and Ontario Association of Canada, to each State Medical Society, and each Medical College in the United States and British Provinces.

The Committee on Improvements and Plans of Hospitals, reported progress and asked to be continued; which was agreed to.

The Committee on Dr. Stuart's letter also reported progress and asked to be continued; which was agreed to.

On motion of Dr. Gundry, it was

Resolved, That when the Association adjourn, it adjourn to meet at the Asylum for the Insane this afternoon.

On motion, the Association adjourned.

The Association spent the afternoon, under the conduct of Dr. Workman, in examining the excellent arrangements and beautiful grounds of the Asylum for the insane at Toronto.

The Association was called to order at 6 P. M., by the President, in one of the rooms of the Asylum.

The Committee on Business reported that the first business in order was the consideration of the paper of Dr. Jarvis on Proper Provision for the Insane.

On motion of Dr. Curwen, the Association proceeded to the discussion of the paper.

Dr. RAY. From the general doctrine of the paper, I suppose, there can be no reasonable dissent. It expresses very well and very satisfactorily to me, certainly, the conditions of the custody and care of the insane, and the objects to be attained thereby. I do not know that it could possibly, for general circulation, be better expressed; and I presume there can be but one opinion on that point. The only point in regard to which there may be a difference of opinion, is that respecting the architectural conditions required for the proper care and custody of the insane. The main idea of the paper on this point is, that all patients of every kind and description, can not be properly treated under the same plan of construction,—that the different forms and degrees of the disease can not be cared for in different parts of the building,—that all patients do not require bolts, bars and guards, and that some will be far more benefited by a certain kind of arrangement than by certain other kinds; that the principal fault in the present treatment of these different kinds of disease is, that the patient who is merely nervous does not require the same outward fixtures as the one that is wild and noisy: that what would be proper for the welfare of the one, would not be proper for the welfare of the other, but on the contrary a source of annoyance.

You are well aware that Dr. Jarvis is not singular in this view of the case; that this view is taken by others, and that there is a

disposition, not very prevalent, I trust, to carry out these views in the coustruction of our hospitals. I believe that has been done to some extent,—I am not exactly aware how, or where in England. It has been proposed that in the construction of hospitals for the insane, arrangements should be made for the different grades of disease; not merely that you should have some halls better finished and with better prospects and aspects, but that there should be a different kind of building altogether. You are aware that the idea has been entertained and formally put forth, that a system of cottages, either alone or in connection with a main building, is now the proper thing: that advanced views on the subject require an arrangement of the kind whereby a considerable portion of the patients should be put out into cottages, without bolts or bars, where they would have more of the fixtures of the home than in the special building.

Dr. Jarvis does not advocate exactly that kind of arrangement, but one which includes in the idea something between the regular hospital and the cottage. However, I suppose we may here consider these views as open to the same general objections. I must say, I can not see for my own part the reasonableness of this view of the case with the experience I have had. I admit that the insane differ, and that they require different arrangements. The practical question is, whether we can provide for their care and custody better on the whole than by the present arrangement of our hospitals,—whether they do not provide for the various degrees as perfectly as they well can, under existing circumstances. You must be aware that the care of certain classes of patients, who may be supposed to require the least of the usual safeguards, can not be entrusted to any one of the ordinary employès in a hospital for the insane. Patients in a private asylum are under a different regimè than that of a public one; and those with unbounded means can have privileges and indulgencies that would be incompatible with the stinted means possessed by our ordinary hospitals. But the point is not what can be done with unstinted means, but what is the best arrangement you can have for hospitals designed for people of moderate means,—for it must be borne in mind that the more you multiply the buildings, the more you increase the expense.

I take it that the most economical method of carrying on the operations of a hospital, is that which brings all the employès and all the service within the smallest possible compass. I do not see, therefore, how this argument can be got over. Not only is the

original outlay greater, but the daily working of the institution is more expensive, because additional expense is required for attendance, heating, and ventilating, and repairs, and improvements.

Economically, or otherwise, then comes a question whether the patients are, after all, any happier from being managed in that way. Does it follow because some are not so very noisy as others, or not so very nervous and depressed, that therefore they are unhappy in association with other classes of patients; that they would enjoy themselves better when left alone in more limited accommodations? I doubt very much whether they would. If you have a group of patients having certain characteristics in common, —let it be this class of merely nervous individuals,—the question is whether they can not be made as comfortable and as well contented in a hall by themselves as they could in a cottage out on an open lot. Unless they can be carried to a very considerable distance, they can not get out of the sight of other patients; although Dr. Jarvis intimates that being separated in this manner, they would be removed from the sight and immediate contact with them. I think in some instances where the experiment has been tried, it certainly has not had the contemplated effect. It is a question with me whether we may not carry isolation a little further than the case requires; whether some patients would not be better by being mixed up with those a little different in disease and character.

This kind of treatment has been advocated for the poorer class of patients, notwithstanding the economical objection. The project has been urged on the ground that a large portion of the patients can be kept in detached buildings or cottages. Practically I can not see how that would be a more domestic arrangement. The cottages would be of a different kind of building from that of the patient's home; there would be several together, for you could hardly suppose that only three or four would occupy a cottage. How does that differ from associations which take place in a gallery with a number together. I see no difference. There is another and very serious objection. I question very much whether you can obtain that kind of supervision—scattered about as these buildings would be—which is absolutely necessary to their proper treatment and management.

To this conclusion I think we are brought by all our experience. The nearer our patients are to us, the better we can look after and see them, and with the greater facility we can supervise all their actions. However it might have been once, we know that the

character of our attendants has been deteriorating steadily ever since any body here has been in this department of our profession. I say that our attendants, tweny-five years ago, differed very much in point of trustworthiness from those we have now; and the tendency has been going in that direction steadily. When I first went into this department of the healing art, the idea of having any other than our own people would have been most repulsive. Now, in most of our institutions, we find among the attendants different nationalities mixed up with our people. Here is another fruitful source of abuse which should warn us against any mode of construction or management which withdraws the attendants from the ready observation of the officers. On the contrary it becomes all the more desirable that our architectural arrangements should be such as to enable us to exercise the most efficient supervision of all engaged in the service. Every cottage requires one or more attendants; they must necessarily be away from the easy inspection of the officers or other employers. What may be going on all the time, we may be a long time in learning. We all know the perpetual difficulty we have in dealing with stories of abuse and ill-treatment. Under the ordinary arrangements, attendants can not be acting improperly a very long time with their charge without being detected; but let them be removed out of the common arrangement, and improper conduct may go on indefinitely. Then the changes in the physical condition of the patient are more out of the reach of observation than they otherwise would be. And still more is this the case with the mental condition. A very considerable and very important change may be going on in the mind of the patient for days and weeks before it is discovered by the officers. Under the present arrangements we readily discover such changes. We discover in season that the cheerful, hopeful patient has become suicidal; that a harmless delusion has been replaced by one of a dangerous character. I do not see how we can obtain that intimate knowledge of the patient's mental exercises so well under these proposed circumstances as we can at present.

Another objection to the whole plan is the facility for elopements and escapes. It is generally understood that when a person is placed in an institution, he shall be kept there,—that no unnecessary risk is run,—because elopement is a serious annoyance to friends and all concerned. I do not see how its frequent occurrence can be obviated under the proposed arrangements, for the greater the liberty, the greater the risk. One of the arguments in favor of these new plans is, that the patient will have a greater

amount of liberty which is made desirable by the fact that "there are some who have no disposition to go away, and therefore should not be locked up." That is plausible, but it is hard to tell whether persons, in a cheerful frame of mind one day, will be the same the next day; and after a patient has enjoyed certain privileges, he is not very willing to relinquish them, however necessary it may appear to us. I think I know something about the disposition of patients to act properly, and to mind their promises, pledges, &c. No great change in the insane character has taken place, probably, within twenty-five years. When I took charge of the hospital in Maine, I found the patients enjoying a certain degree of liberty. We had one gallery open. The patients went in and out as they pleased, and I had thus an opportunity of observing the result of the asylum. Some of the indolent would go out and lie at full length on the shady side of a tree from morning till night; some would go into the houses of the neighbors, much to their annoyance; some would take the opportunity to go to the post-office and post their letters; while others would go to the village and consult lawyers about their case. I thought the results fully warranted me in changing the system, and so locked the door. I thought that long walks with an attendant, and the privilege of working on the farm, would be more beneficial to them than unrestricted liberty. Similar to this, I apprehend, would always be the result of any considerable enlargement of the personal liberty now enjoyed by our patients.

On motion of Dr. Kirkbride, the Association adjourned to meet at the Rossin House, at 8 1-2 P. M.

EVENING SESSION.

The Association met at 8 1-2 P. M., and was called to order by the President.

The Association resumed the consideration of the paper of Dr. Jarvis.

Dr. KIRKBRIDE. After the very able review of the paper of Dr. Jarvis by Dr. Ray, it does not seem to me to be necessary to say anything more on the subject. I have expressed my views frequently in the Association and in my annual reports, and I have seen no reason whatever to change them. If I should say more, it

would only be to re-affirm them. I am more thoroughly convinced than ever about the correctness of the views heretofore adopted by this Association. The criticisms of Dr. Ray are exactly the same that I should have made, and I am unwilling to take up the time of the Association by going over the same ground.

Dr. LANDOR. I do not know, sir, that I have much to say upon the subject. If Dr. Ray had represented in his criticisms Dr. Jarvis' opinion, why, I should condemn the principles of that paper just as much as Dr. Ray did; but I can hardly think that that is the method it is intended to adopt in this cottage system of treating the insane. It does not seem to me that the right principle is to take all the comers, as soon as they enter into an asylum, and whatever their characteristics may be, to put them into the separate or cottage system. It did not seem to me that Dr. Ray's representation of Dr. Jarvis' paper was what Dr. Jarvis would himself have stated it to be. I can not think that every new comer into a hospital ought to be put into a cottage, and have the privilege of going about where he likes; that is not my notion of the cottage system. I think nothing could be more desirable than to have a cottage on the same farm where the asylum stands, within easy reach of the superintendent, and within his daily observation. Then I think it would be very desirable to have the superintendent select such cases as he thought fitted to enjoy liberty; and if he thought, after a tolerable length of period, that patients were then fitted, then I could think of nothing more desirable than to give that liberty. I have done it myself. I was desirous that the government should give a sufficient appropriation to have it done at London. I sent upwards of twenty patients to work on the farm when the asylum was at Malden; selected some twenty to do that work and to go about the farm without control, only returning at night. They behaved themselves most discreetly. I tried it for a year. On Sunday I allowed them to wander into town if they liked. Some of them went to church, and others did whatever they were told to do. I think if the superintendent used bad judgment in the selection of his cases, he is responsible for the results.

The cottage system, I believe, is desirable, because it gives them liberty and domesticity. I would make these cottages very convenient for the accommodation of half a dozen or a dozen in each. I would give them proper supervision, inviting them to visit each other in the evenings, and giving them some other liberties. I think we could control them by kindness, and by threatening to send them back to the asylum under lock and key if they abused

their privileges. I do not know whether Dr. Ray may entertain exactly these opinions, but my views are as I have stated them.

Dr. Parsons. Without undertaking fully to enter upon the merits of the question stated in Dr. Jarvis' paper, there are some points that I think worthy of consideration in connection with asylums as now planned and constructed.

Sometimes an asylum that is well planned and complete in all its parts becomes overcrowded. A greater number of patients require accommodation than were provided for in the original design. On investigation it is found that there has been a gradual accumulation of quiet and incurable cases, and also that some of these chronic cases are so untidy and filthy in their habits that they require constant and especial personal attention both by day and by night. Now none of these cases require that immediate medical supervision that is required by more recent cases. Hence they might be a little farther removed from the medical headquarters. Asylum accommodations can be increased so as to be admirably adapted to the wants of these classes by the erection of detached buildings, one or two stories in height, at a little distance from the main structure; near enough for convenience of administration, but so far off as not to interfere with the completed plan. These buildings should be constructed in a simple, economical manner. There guards for the windows. If an extreme of economy is required, the same room may serve as a day room and also as an associated dormitory by night. Considerable advantage would be gained, need be no separate rooms for patients, and there need be no strong however, at a moderate increase in expenses, by erecting these buildings two stories in height, using the upper story as an associated dormitory, and the lower story as a day room. There should be a dining room, pantries, and water closet in the lower story, and in the upper story there should be a water closet and storerooms. A few rooms should be provided for attendants, and these should be arranged in accordance with the organization to be adopted as regards supervision. There are other advantages besides that of economy in this method of increasing the accommodations of overcrowded asylums. The large day room and the associated dormitory are admirably adapted for quiet, but untidy and filthy cases, that require constant supervision throughout the whole twenty-four hours; while the situation of the day room on the first story so diminishes the trouble of getting the patients out into the open air, that in point of fact, they will enjoy this agreeable and healthful mode of life to a much greater extent than they

would if a flight of stairs intervened between the day room and the airing courts.

I do not know that these remarks have a very close connection with the leading idea of Dr. Jarvis' paper, but they at least are in accordance with his idea in so far as they relate to detached buildings, and have also, I am inclined to think, a practical bearing.

Dr. HUGHES. I have not read the paper of Dr. Jarvis, neither have I seen it, and I am sorry that I have not. Under the circumstances I would not like to be understood as subscribing to it, or assenting to any of the views expressed. If in the remarks of Dr. Landor the views presented in the paper are correctly set forth, I must say, so far as my experience has gone in hospital management, that I would be decidedly inclined to favor the American College system. I can not speak for other gentlemen, but in my own experience, I do know that there are numerous patients who certainly derive benefit from being assigned to nicely-constructed cottages upon the asylum premises, allowing them the utmost latitude compatible with their mental and physical welfare, and not having them placed under lock and key. I think that in nearly every institution I have visited where acute and chronic insane are placed together, that perhaps as much as one-tenth might be treated in this way; and it is a much more economical system than the present one. The expenses of window guards and costly structures necessary to make buildings secure, would be avoided, and yet there would be additional comfort. I think upon the score of economy in regard to the views entertained by Dr. Jarvis, as set forth by Dr. Landor, I would certainly be in favor of thus treating this class of patients,—the known harmless class.

Dr. JARVIS. Dr. Landor came nearer my views than Dr. Ray did.

Dr. COMPTON. I have no experience in the cottage system; but I confess I read Dr. Jarvis' paper with a great deal of interest and was pleased with it. But the weight of authority which has been brought to bear against it is so great that it has created some doubts in my mind as to the propriety of it. I thought, however, while I was reading the paper, that I had fifteen or twenty in our asylum with whom the system of Dr. Jarvis would work admirably, and it was an important matter with us too, as we have been over-crowded for more than ten years.

Dr. WALKER. What class of patients are those to whom you allude?

Dr. COMPTON. They are harmless males, such as work daily in the field and whom we send to the wards at night. I think they

would do in cottages and then give more room for violent patients.

Dr. KIRKBRIDE. What Dr. Hughes expressed as being economical, I think would be just the reverse.

Dr. HUGHES. I will try to explain. I do not know how it would be with you in Philadelphia; it would depend very much on locality.

We have a farm of five hundred acres of ground, and a pretty fair proportion of the patients are occupied on it. We have a certain number of men who assist the dairyman, farmer and other employès. Being distant from a city, we are obliged to supply our own milk and keep on an average seventy or more cows. Those parties who are put on the working list are allowed to go out to work on the farm and in the garden and dairy, and also as teamsters, where called for. Our present working list numbers fifty patients out of the two hundred men, and they might just as well be maintained in farm houses, or other buildings about the premises as in the asylum.

Dr. KIRKBRIDE. Have they burned down anything by carelessness?

Dr. HUGHES. No, sir; I would not trust them with fire, and keep them from matches.

Dr. KIRKBRIDE. How would you prevent them getting matches?

Dr. HUGHES. They would be under the supervision of the gardener, farmer and others.

Dr. KIRKBRIDE. If they get matches once, you would be apt to have trouble.

Dr. HUGHES. I think they would not get matches, if properly looked after.

Dr. RAY. If they were kept in halls, they would not get them.

Dr. HUGHES. Can you not exercise a system of surveillance to prevent them getting matches?

Dr. RAY. I never knew a patient who was allowed to go into the kitchen, that did not get matches.

Dr. KIRKBRIDE. I have had some small experience in regard to cottages for the insane, detached from the main building. I began as far back as 1854, when I recommended and had one put up in connection with the Pennsylvania Hospital for the Insane. At that time we thought the idea a good one, and we supposed that before this, we should have had a dozen scattered about our grounds. Experience, however, soon taught us that no such arrangement was desirable and we have never built a second. The supervision was almost certain to be defective, and the farther off

the buildings, the worse the supervision would be. Every one,—even the highest officer—would constantly find themselves making excuses for not visiting these detached structures, on cold and stormy nights, and on other inconvenient occasions. This system only leads to the transfer of responsibility from yourself to your subordinates, and I would like to know who would be willing to trust the supervision of any regular ward to one of these subordinates who are to live in these detached structures. No building should be so far from the main structure that it can not be connected with it by a covered way. It is just as easy to give any amount of liberty you see proper in an ordinary ward of the main hospital as in a detached building. You may, if you think it wise, which I do not, have open doors, unprotected windows and an absence of all restraint, but still you surely would like to know what is going on among your patients and those having them under care.

Dr. D. T. Brown. In anticipation of the erection of new buildings for Bloomingdale Asylum on a new site, it became my duty to consider whether it seemed best to modify the usual system and to separate the buildings into groups, or to erect smaller structures apart from the main building. After abundant and disagreeable experience of nearly twenty years, I had no intention of repeating that system unless there should seem to be reasons adequate to overcome my own impressions. Therefore I had several conversations with Dr. Kirkbride about the matter, and concluded not to have separate buildings in our structure.

At the Bloomingdale Asylum there are separate buildings, and there is a prejudice against them in the minds of the patients as well as among the friends of patients. They all feel that there is a disparagement somewhere. They desire to be near or within the main building, for they think the nearer the centre the better the accommodations and the better the service. I proposed to have small buildings, similar to those at Somerville, but in accordance with suggestions made by Dr. Tyler, we determined to have those buildings connected with the main structure rather than separate, attaching them by the mode of conjuncture that Dr. Kirkbride used with his recent addition,—the Fisher ward. On general principles I would be unwilling to place any near friend of mine in any cottage or other building beyond the immediate supervision of the principal officers of the institution. I could not feel easy or justified in entrusting such friends to the care of such attendants as I should find, even in the buildings least removed from the main structure. I think the principal officers can be readily seen ap-

proaching the buildings, inducing eye-service instead of the proper performance of duty among those subordinates. Instead of being desirable or homelike or agreeable for the patients, any one seeing the cottages of the French asylums, separated from the main structures and surrounded by high enclosures, where men and women are isolated entirely from others in luxurious apartments, and surrounded by servants in livery sometimes, would be painfully impressed with the solitary confinement of those wealthy or noble but unfortunate patients. I am sure there is nothing I can recall in connection with the insane asylums of Europe more oppressive than those isolated cottages. I have maturely considered the matter in connection with the new asylum at Bloomingdale and I give my impressions on the subject after considerable experience and abundant reflection.

Dr. DeWolf. When it becomes necessary to relieve an asylum which is overcowded, it will often be found advisable to extend the original building by semi-detached structures, after the pavilion or block plan, or by such modifications of this and the house and cottage plan as are found for instance most judiciously blended in the new Surrey Asylum, England. There might be relief afforded by boarding out patients in cottages, not on the asylum grounds, but in the neighborhood. Certain patients could be very well boarded out in that way, and still continue under the care of the medical superintendent. This system is more likely to give general satisfaction than that of having cottages built upon the hospital premises. The whole question of asylum construction and management is most ably treated by Dr. T. Norton Manning, inspector of insane, Gladesville, New South Wales, in his recent very valuable report to the Government. I have a copy of that report at the service of members of the Association, and beg to refer to it on the subject under discussion.

Dr. Waddell. Where money is not a consideration, the cottage system may be tried to ascertain the result. In my opinion, however, no plan yet devised for the care and treatment of the insane, is equal to that adopted in our medium-sized institutions, as at present constituted. Those patients to whom large liberty may be given, who labor on the farm, might be provided with suitable accommodation near their work, and the epileptic, the paralytic and the imbecile might also be kept in a separate cottage from the main building,—possibly in both cases, to the advantage of themselves and to those from whom they are separated.

It is an experiment that I should like to see made, but it would

increase expense. In the meantime, however, I approve of the action of this Association at one of its former meetings, in recommending that all the insane should be treated alike in our larger and better institutions under professional superintendence, and not some in such buildings and others in county and alms-houses.

Dr. Cook. I can hardly discuss Dr. Jarvis' paper, as I am not fortunate enough to have a copy of it. I have a little to say on the views advanced on this question of classification. They are important, as there is doubtless a difference of opinion in the profession. There are those who hold the views that Dr. Landor has expressed. There are those in England who hold these views who are making a practical trial of them. On the continent they have also been advanced, and a committee appointed by the French government reported substantially in favor of some such plan. As to the question of economy to which several have alluded, I think it would have to be rather a matter of practical demonstration than of opinion; the cost depends largely upon the relative number of separate sleeping rooms and associated dormitories; and if a building can be erected with less corridor space, that would materially reduce the cost. If the plan of heating was less expensive, that would make some difference in the cost. Some reduction might also be made in the architectural arrangements of the building; it might be plainer than the large hospital. These are all proper questions, I think, and have been, or are now being, practically considered by many persons. I can not express an opinion on other points in Dr. Jarvis' paper.

Dr. Bancroft. I fully sympathize with the general spirit of Dr. Jarvis' paper, and it strikes me the views taken may be true of the limited variety of patients from which the picture is drawn. But it seems to me that in hospitals where every variety of insane patients must be received and provided for, there would be much greater difficulty in making these views practically applicable. I know very well how precious the time of the Association is to-night, and how little accustomed I am to speaking, and therefore shall say but little on this subject; but there are one or two ideas which I must offer. At the time Dr. Jarvis read this paper at Hartford, I was much impressed by its contents, as well as by a case or cases illustrative of the effects of confinement and repression, which are not in the paper as printed. I did what I could at the time to secure the printing of the paper, that we might reflect upon it and compare its statements with our own experience, with a view to see how far its suggestions were practicable in our hos-

pitals. I determined to make it a constant study among my own patients, (averaging 240,) to learn, if possible, whether, after careful and thorough examinination of the character of each case, a less amount of repression could not be adopted, to the advantage of the patient. I must confess, after another year's observation, with the subject daily in mind, much as I desire non-restraint, I am surprised to see how few cases I have found in which I could use less restraint than we have been accustomed to use, and by so doing render better service to the patient. In this connection, while I have the utmost confidence in the good intentions of the writer, it still appears to me that the paper does injustice to our hospitals with the public, by suggesting, at least, the practice of excessive restraint. I entertain this question always in the opposite spirit, and whenever the checks upon personal liberty can be lessened without injury, it is my highest satisfaction to do it. But the facts on the subject, and my personal observation, do not convince me that excess of restraint is used in our hospitals; but that the abandonment of the minor restraints now used would damage rather than benefit the patient. Now Dr. Jarvis says the sense of self-respect is injured by the "barred windows and locks on the doors." This is one of the evidences to my mind that the picture has been drawn from the view of a too limited number of cases. Such a case may rarely occur, but so rarely as hardly to effect the general statement, that it sinks into insignificance when opposed to other vital necessities, applying to almost every case. I have seen many more cases showing a painful consciousness of inability for self-regulation, and expressing a profound sense of relief on being within the range of hospital restraint or protection; in having a power to lean upon, outside themselves and independent of their consciously disordered forces. Allow me to refer to an illustrative case. A gentleman of estimable character, worn with business, in failing health, having suffered for want of sleep, was found in the night in the act of leveling a fearful blow upon the head of his wife, who was sleeping near him, impelled by an insane delusion to the act, and yet dimly conscious of its enormity. Being prevented from the commission of the deed, he earnestly entreated his friends to place him at once under the restraints of a hospital. Once there, a sense of relief filled his distracted mind, which seemed the first step in convalescence; and gratitude for hospital restraints and limitations never ceased to fill his mind, either before or after complete restoration. There is no end to the list of cases which might be cited, drawn from the records of every form

of insanity, as found in our hospitals, to show that the restraints in question are not only demanded by prudence and humanity, but very extensively satisfactory even to the subjects of them.

In this class of delicate and highly sensitive persons referred to by Dr. Jarvis, this is equally true, but the sentiment of self-respect is only one of the interests to be provided for. The window-sash and the lock which may disturb the sensibility of some one, may also save the same one from self-destruction, and become eminently desirable in the general balance of evil and good. It does not accord with my observation that the patients in our hospitals are suffering from a sense of restraint in the way indicated in the paper. It is more a sentiment, which has occupied the popular mind, than a reality. In my observation of the insane generally, as seen in the daily round of hospital life, I do not find them, as a matter of fact, distressed about the screen of the window or the lock on the door, but in the face of these, as needed limitations, accepting the guarded latitude and liberty which it is the constant study of hospital physicians to provide, and thus leading a life within and about the institution differing far less from the ease and freedom of the family than the feverish public seem to suspect.

I am entirely without experience in relation to such buildings as those referred to by Dr. Kirkbride, or those separate buildings at Somerville. But I believe if smaller and more isolated buildings were provided, we should soon see our patients desiring to return to the larger and more public apartments. Very few, I believe, would be willing long to exchange the activities and the social good cheer of the larger numbers, for the monotony and dullness of the isolated cottage. I understand this has been found true in many cases at Somerville. The impressions left on the minds of recovered patients throw light on this point; and what these impressions are is shown by the frequent visits made by them (after their discharge) to their hospitals. They often desire to visit the halls where they have lived, revive the associations formed there, and join in the sociabilities to which they had, while patients, become accustomed as a part of their curative treatment.

In the nature of the case, no domestic adjustment can relieve the restlessness of every insane person, or of most in certain stages of the disease. You may place him in a private family, with plenty of attendants; you may surround him with all the evidences of personal freedom, and still the restlessness remains, because it is the disease and not the surroundings.

In regard to the last paragraph of the Doctor's paper, it is un-

doubtedly true that there is more or less public distrust of hospitals. I do not believe it is due to the prevailing plans of treatment in them, but to other influences. It exists most with those who really know the least of them. I believe that just in proportion as the people become acquainted with the internal workings of our hospitals, they have confidence in them. That the management of these institutions is responsible for this distrust I deny emphatically. The responsibility rests with the ignorance and prejudice inherited from the past, assisted by the sentimental schemes of inexperienced and ambitious dogmatists. When the public come to comprehend the views of insanity expressed in the papers which have been read in this Association; to learn that insanity is physical disease which, like other diseases, is to be combated by rational treatment, and that whatever is peculiar in the hospital for the insane is demanded by the peculiar symptoms arising in this disease, then will these institutions enjoy an equal share of public confidence with the general medical profession.

Dr. GRAY. My views have been expressed quite freely on this subject heretofore, and further observation and reading only confirms them. I must say, with all respect to Dr. Jarvis, that I think his paper sets forth this subject in a very fallacious light. He selects a class of cases, such as he has had under observation in private houses, just such cases as are treated in private families, and need not go to hospitals at all. He is disposed to take these cases as representatives, though they are entirely different from those for which hospitals are a necessity. I can not help thinking that just such views, sent forth to the public, are more injurious to hospitals than even the public prejudice that is existing through ignorance and superstition. All such views, and also those expressed in the last report of the Massachusetts Board of State Charities, attributed to Dr. Howe, are equally injurious to institutions and the insane, and to the advancement of hospitals. Dr. Ray, I think, has fully answered the whole question here. Those long experienced in this specialty have observed this thing carefully, seeking but one end, and that the benefit of the patient; seeking but one aim, and that is how the hospital can be carried on at least expense and yet in a manner that the disease demands. It seems to me conclusive, that the results of long experience should not be thrown aside lightly, and opinions of men without practical experience should not have great weight. Every little while the old projects are brought up anew by persons temporarily in power as original and novel, and schemes are presented which can not be made practicable.

Now of all who have suggested these separate buildings, no one has attempted anything. It is to be regretted that State governments are to be asked over and over again to enter upon these profitless experiments which have been tried already, and which experience has shown are not practicable at all. I have again and again had opinions quoted to me upon the very subject to which Dr. Bancroft has alluded. These men, like Dr. Maudsley in one of his books, are disposed to make the public believe that medical gentlemen connected with existing institutions had such prejudices that they were not disposed to listen to these new theories. They represent a class who have little or no idea of insanity or the personal liberty which the insane can have, and declare that we are confining men more than we ought to do. "We ought to give them liberty, freedom, &c." The only answer to these people is this: "Go into the State hospitals and pick out such cases, and become responsible for their welfare, and take them to your homes and give them domestic life." I said to one gentleman who was quite sure that the views of the Massachusetts report ought to carry great weight, and that these institutions were being too much enclosed, "Why not take such patients as are committed to hospitals, and agree to take care of them in this cheap and loose way, and be under the supervision of the Government, who will see that you do your duty? Have them wander about and intrude on your neighbors." He did not desire to make the experiment himself, but he insisted that the superintendents of asylums should receive such advice, and recommend the Government to establish them.

Now in the light of experience and observation of the insane,—in the light of knowledge of what this disease is, of what is really for the good of these individuals, it is impossible that men of experience could recommend any such course.

Dr. WALKER. Before touching upon the question under consideration, permit me to draw a moral for the benefit of the Association. It is ten o'clock at night, and we find ourselves discussing one of the most important papers we could have before us, with less than two-thirds of the full Association, and with less than two-thirds of the young men, who need this discussion the most. Why is this so? On the first day of the session we put it off that the absentees might be here; those who neglected to come up to the meeting on the first day of the session. This very state of things was predicted; but it was thought it was not courteous to them to go on with the discussion when we might have discussed it with good to others; yet here we are to-night, at this late hour, and but

few members of the Association knowing what is being discussed here. Talking about the dirty and filthy being taken care of outside the building,—the question is the construction of hospitals for all sorts of cases, the chronic, the acute, &c. It has nothing to do with the farm, liberty, epilepties, &c. Dr. Jarvis says: "Moreover, as everything should be arranged to keep in the patient's mind the feelings of home as such, and to remind him of the hospital as little as possible. These dwellings for the mild should be not only separate from, but out of sight of, the stronger and more forbidding house, which might call out their painful sympathies, or be an ever-present warning to them of ther liability to change for the worse, and a standing threat that if their disease should take an unfortunate turn, and they become excited, they must be removed to that place of stricter confinement. Even the names by which the houses are designated have an influence on the tender sensibilities of the patients. They should not be called by any term that signifies a hospital or any of its parts, but by names that are used elsewhere for common dwellings, and have pleasant associations connected with them. They should be called houses or places, and if necessary to designate them more particularly, some term appropriate to their position or circumstance, as grove house, if near a grove, elm house, valley house, orchard house, &c.

Between these extremes, the large house, with suitable means of security for the violent, and the simplest dwellings for the mild and trustworthy, there should be intermediate other buildings, with various grades of strength and grace, with the appropriate means of repression and guardianship, of comfort and freedom, which the intermediate classes of patients may need or can profitably enjoy." Now, I appeal to you, if Dr. Ray, in the discussion of this question, had not in mind the exact proposition of Dr. Jarvis. If the question means anything, it proposes to put up, within some enclosure, separate houses, one out of sight of the other, in which different classes of patients should be accommodated; and it is to this very point that part of the discussion to night has been tending.

Now, sir, my experience has been that the very people who need these houses of restraint the most, and who need the lock on the doors and on the windows, are those who complain of them the most; and that the quiet, mild patients in whose behalf we would break away all bars and locks, and give them fullest ingress and egress, are those who complain the least. I have in my mind a number of that class of female patients.

A few years ago, I doubt not, if we had gone to Dr. Jarvis at Dorchester, or visited the inmates of the hospital at Boston, we would have found that those I speak of were the last to complain of confinement; they were just those who are described by Dr. Jarvis as "mild, intelligent and affectionate."

In addition to the expense to which Dr. Ray barely alluded, I think there must be great additional force, if you have houses separated from each other; they must be officered by themselves, each must have its kitchen and the food must be prepared there. I ask how it can be done cheaper than in a large hospital where there is one kitchen and one lot of domestics. It does not need an arithmetic to tell if these persons are to be gathered into families outside of each other, which will be the most costly. How are you going to protect the female portion at night? In case of accident, or fire, or an attempt at suicide, where the presence of mind of the women may be at once overthrown, are you going to leave them without men on whom to call? Of course not. Then, sir, human nature must change entirely, or it requires not me to tell you that these patients are not safe,—that the hospital itself can not be safe from scandal or the superintendent from utter overthrow.

Dr. Jarvis. Two years ago having an engagement with the census committee of Congress at Washington, I left this Association at Staunton on Friday morning. On the way Dr. Brown talked to me about the plan of hospitals. He talked very freely and he asked me in the end to write out for him my notions of the way a hospital should be constructed. In the summer of 1869 I began to write out my notions, but having long felt a deep interest in this matter, instead of a letter I wrote that article. Not willing to send it out hastily I left it in my desk a year; then I copied it and looked over it. Then the editor of one of our magazines offered to print it in his journal. I preferred to read it first to this Association, which I did last year at Hartford. It has been printed, as you know, for the use of the members. Except this it has not to my knowledge been before the public in any form. I wrote that out of my experience of thirty years. I began to take patients in 1835, and excepting five years when I was in Louisville, Kentucky, I had constant and immediate charge of patients until 1865. Since then I have received none into my care, but I am continually called upon to examine cases, and determine how they ought to be disposed of. I probably see as many patients as are admitted into the smaller hospitals. In all cases I am required,

like the superintendent, to make a careful examination of the patients and their history. After this my first question is, what do they require for their restoration? Can the circumstances of their home be so arranged as that they may recover there? I have found a few who regained their mental health without removal. If, however, removal seems to be necessary, then I examine the question whether simple separation from home will answer the purpose. I have found many who recovered with only this change. Again, if more than this be required, if the discipline and influences of a hospital be needful, the last question that presents itself is what hospital is best suited to the pathological and pecuniary condition of the patient. Nearly all, both of those whom I formerly treated and those whom I only examined, were acute cases; about half of the latter were sent to hospitals and as many provided for elsewhere. So far as I now remember, as large a proportion of those who were treated abroad or at home recovered as of those who went to the public institutions. For twenty-five years, I had patients in my own house, a wooden combustible structure, and with matches in it. I boarded them with neighbors, in wooden combustible houses, with matches in them. I have never known an instance of their setting fire or attempting to set fire. I have never known any violence or attempt at violence. The patients both in my house and in others were under the immediate care of faithful attendants. I always made it a condition of taking patients, that if at any time it should appear to me that they could not be properly managed by personal influence in a private house, or that they would be treated with more advantage to themselves in a hospital, I should send them to such institutions or the friends should take them away. Thus I have sent some to the McLean Asylum. The patients I had were of the milder type. They represent a considerably large class, who do not need grated windows or strong doors or any of the means of external or bodily restraint to keep them under control. Ordinary dwellings with wooden sashes and the usual domestic arrangements are sufficient for them.

The private lunatic asylums of England, in which most of the private or paying patients are kept, are generally ordinary dwellings; many of them were gentlemen's country seats, quite large, and obtained at comparatively low cost. I visited many of these, and examined all their parts. I saw no grated windows, no heavy doors, no strong bolts.

In some of the public asylums, as at Rainhill, where are 600 to 700 pauper patients, all the windows have wooden sashes, with bars

no longer than those of ordinary dwellings. There were, however, internal arrangements, wooden shutters and wire network in some of the rooms for the excitable and violent, but the weak, confiding window was all the defence of the great majority of the rooms.

The Worcestershire asylum has iron sashes. But the superintendent told me that the reason was that they could be made with smaller bars than the wooden, and thus made the room light and airy and pleasant to the inmates. Yet they could be broken by the hand of one disposed to be violent. I do not propose that you should have no grated windows nor strong doors nor thick brick walls. I only propose that the buildings should be varied in structure and arrangement to suit the various conditions of the patients, —that every part of the hospital should be made as home-like as possible, and yet that the patient should be under such supervision as the superintendent may deem proper, and that he should have all, as they are now in hospitals, constantly within his knowledge, and know from day to day, or if need be, from hour to hour, their condition, and any changes that may take place. By this means he will be prepared to transfer any patient that needs such change to a more secure room or ward; and on the contrary remove any one who would enjoy or profit by the privilege, to the freer and less restrictive quarters. With this plan of arrangement and management, there would be no more danger from outbreak or violence than there is now; but the physician would have a power and influence over some of his patients that he can not now have, and they would suffer less from needless restriction and privation.

The cottages that I saw at Musselboro, near Edinburgh, did not recommend themselves to me. Nor am I satisfied with the description of the new plan of cottages proposed by Dr. Brown, in Scotland. Still less am I satisfied with the accounts of Gheel. Although Gheel has many advantages, and much to be admired, yet I could not accept that system; it should be adopted in part, just so far as patients can be trusted.

My idea of the matter is, that the asylum should include liberty or confinement; if necessary to have two-thirds strong, or if four-fifths, so be it, but give no more strength than necessary. I know how strongly some people dread the hospital. Some people come to me and ask me about the best place to go to. They desire that they may not be under any more restraint than necessary; but the dread of the hospital and its restrictions is very great. Some I am not able to persuade, and take the next best step for them; some say to me, "I would rather my daughter would die than go to a

hospital," yet with that aversion they have consented to allow them to go.

Dr. BANCROFT. In those cases have they given definite and particular reasons why they should not go?

Dr. JARVIS. Yes; and some of their reasons are groundless; but this fear of the hospital is much more common than you gentlemen know. I believe many are on this account kept out of the hospital which offered the only chance of their restoration, and retained at home, or subject to all sorts of ineffective methods of cure, and yet die unhealed. No doubt the dread of the hospital arises from the dread of being locked in. Notwithstanding what Dr. Walker says, I have been much consulted by the friends of patients in the hospitals, whom they wished to get away. I have advised them to let them stay there. I do not say it is very common.

On motion of Dr. Curwen, the paper was laid on the table.

The minutes of the meeting were read, and the Association adjourned to meet in London, Ontario, to-morrow evening.

FRIDAY, June 9, 1871.

The Association spent the forenoon in going to London, Ontario, and the afternoon in examining the excellent arrangements of the Hospital for the Insane at that place under the care of Dr. Landor.

The Association met in Dr. Landor's office, at 7 1-2 P. M., and in the absence of the President and Vice President, (the latter of whom had been sick for two days,) was organized by the appointment of Dr. John Waddell, as President pro tem.

The Secretary read the report of the Committee on Resolutions, which was unanimously adopted.

The Association of Medical Superintendents of American Institutions for the Insane assembled in Toronto to hold their twenty-fifth annual meeting, and being about to separate, feel it incumbent upon them to acknowledge the various manifestations of

courtesy and kindness from the citizens of Toronto, both official and private, and they avail themselves of this privilege with equal pleasure and gratitude.

They, therefore, would first tender to His Excellency, the Lieut. Governor of the Province of Ontario, the Hon. Mr. Howland, and to Mrs. Howland, the assurance of their hearty appreciation of the honor they were pleased to confer on the Association, by inviting its members to visit them at their residence, and by their munificent hospitalities.

Secondly, to I. W. Langmuir, Esq., Inspector of Asylums of the Province of Ontario, we are indebted for his assiduous and indefatigable efforts to make the visit of the Association both instructive and agreeable, and they would frankly recognize the fact that our obligations to Mr. Langmuir can not be adequately expressed in the compass of a resolution of thanks.

That our eminent and respected colleague, Dr. Joseph Workman, has won the honorable position he holds in our specialty, by a wise comprehension of the multiform duties of his arduous office, and by a courageous energy which has continued unappalled in the face of no slight obstacles, we now readily understand after personal inspection of the great institution over which he so worthily presides. We recognize in its vast dimensions, in the spaciousness and comfort of its new apartments, in the tasteful adornment of its grounds, and the systematic provision for out-door occupation and amusement of his patients, the serious nature of the problem committed to him, and the masterly skill with which he has solved it.

That we rejoice in the opportunity afforded us for a thorough inspection of the new asylum at London, lately opened for occupation under the rare judgment and good taste of our skilled and genial associate, Dr. Henry Landor. With its attractive exterior, its spacious wards, well-arranged, amply lighted, comfortably furnished, admirably ornamented, lacking no essential of a complete and attractive home, with not a dollar expended for mere display, it presents a hospital in the true sense of the term, creditable alike to the head and heart of its able and experienced superintendent, and to the liberality of the government and people who have authorized its construction. As year after year it shall silently perform its great work of Christian charity, the citizens of this province will find more and more cause to be satisfied with the expenditure so liberally but wisely made, and with the clear head and kind heart to which they have entrusted its management. Fortunate are the people of Ontario that they can point to two such

noble hospitals as those at Toronto and London, and to two such able, intelligent and devoted superintendents as Drs. Workman and Landor. We shall return to our respective homes with a more abiding faith in humanity, and an increased zeal in our chosen calling, for having visited our brethren across the line.

To the Honorable the Attorney General of Ontario we present our thanks for the complimentary offer of the use of the Assembly Chamber of the Parliament House for the meetings of the Association and for other distinguished courtesies.

To the Chancellor of the University of Toronto for an invitation to attend the convocation, which a previous engagement prevented our accepting; and to Rev. Dr. McCaul for his courteous attention in exhibiting and explaining the treasures of the college.

To the Principal of the Normal School we are indebted for an opportunity to examine the arrangements and valuable collections of that institution.

To the Medical Council of Ontario for a courteous invitation to attend their sessions, but which the nature of our duties compelled us to decline.

We respectfully acknowledge the invitation of Dr. W. J. Palmer to visit the Institution for the Deaf and Dumb, which want of time did not permit us to accept.

Our thanks are due to the Great Western Railroad and Grand Trunk Railroad for courtesies extended to members of the Association.

Our thanks are also due to Mr. G. P. Shears, of the Rossin House, for his liberal provision of a room for the meetings of the Association.

On motion, the Secretary was requested to send copies of the resolutions in relation to the payment of the expenses of members attending the meetings of the Association to the Board of Management of the different hospitals.

On motion, the Association adjourned to meet in Madison, Wisconsin, on the last Tuesday of May, 1872.

JOHN CURWEN, Secretary.

SUMMARY.

On Nosological Position of General Paralysis. [By G. Mackenzie Bacon, M. D.] The term "general paralysis" is not, it must be admitted, a satisfactory one, but, though many attempts have been made to improve upon it, nothing better has yet been agreed on. However faulty the term may be, it is best to have a clear understanding as to what the words may be supposed to imply.

In the last volume of the Guy's Hospital Reports, a writer, in some remarks on this subject, argues that the phrase "general paralysis" should include other cases than those to which it is applied in asylums, and that general paralysis of the insane is only one form of a diseased state of brain seen as much out of as in asylums.

He says (p. 183) "Under the term general paralysis of the insane, a very characteristic form of disease is implied, but if modified forms and early stages be included, the term is *equally applicable to other affections.*"

Again (p. 184,) "I do not doubt that there is a very remarkable and common disorder which is generally known by the name of the general paralysis of the insane; but seeing that the term is by no means accurately defined, since the peculiar mental symptoms which have actually afforded a name for it in France are not always present, I can not but find fault with it, and ask for one which is somewhat more restricted, or, if not so, demand that the present one be allowed to *include a much larger sphere of disease.*"

With every respect for the opinions of so able and distinguished a physician, I beg to offer a few remarks on this question from the "asylum point of view," and I believe my opinions accord with those of most asylum superintendents.

It has always seemed to me that the disease called general paralysis of the insane had a special character of its own, and differed from other sorts of brain affections seen among the insane, or even the sane. I have always restricted it to the familiar disease associated with grand delusions and a certain train of other symptoms, and I think the term can be of no value unless so restricted. The term is bad enough, but I can not admit that any term descriptive

of the disease in question is "equally applicable to other affections." I should not myself apply it to a case of increasing feebleness of limbs without certain mental symptoms, and the course of the disease differs from that of chronic alcoholism, &c. The bodily symptoms of more than one general disease of the brain may be much alike at a given period, but the whole character of the earlier phases may have been very different. Some confusion may arise from the fact that all men do not use the term with the same care or precision in their statistics; but I think it may fairly be said that those living in asylums, as a rule, speak of but one condition under this head. I admit that such men are probably unfamiliar with some other paralytic states which are seen in hospitals, but it may be that a more extensive comparison of experiences would establish two distinct sorts of disease, only resembling one another in the feature of paralytic enfeeblement.

General Paralysis of the Insane has some peculiarities in its history and symptoms which may serve to discriminate it from other forms of disease, such as these:—

It is not hereditary.

It occurs but rarely among women.

Certain mental symptoms are always associated with it, and generally precede the paralytic symptoms.

In most cases epileptiform attacks, affecting one side or one limb and half the face, occur during the second stage.

A curious amelioration takes place after a certain period, when cases are brought early under proper treatment. The "optimism," the often furious character of the mania, the destructive tendencies, and the mixture of elation and confusion of mind, producing the most ludicrous contradictions, are such as are not seen in other forms of brain disease.

These phases recur so constantly, and in so many instances, that I do not see how to doubt that there is such a disease, whatever its name, and that it differs from others in which patients fade away gradually and die paralysed. It may be that those living in asylums have a more vivid impression of their own cases from seeing so much of them, and being so often perplexed in their treatment, and they may not be sufficiently attentive to other phases of brain degeneration; but it seems to me that the history, symptoms and pathology point to a disease different from any other, and that the symptoms I have alluded to almost suffice to answer the question "what is intended by the term general paralysis?"

Supposing, however, that there are numerous other cases in which body and mind decay simultaneously, so as to deserve the title of dementia paralytica, how is it that so very few of these reach the public asylums, where the poor must needs be brought in course of time? Such cases are seldom to be found in them, whereas the other form is abundant in every country.

Various observers have worked out the pathology of this state, and enumerated sundry destructive changes in the cerebral substance, membranes and cord. It is, doubtless, not easy to attribute a distinctive pathology to every brain affection, but the *character* of the previous symptoms suffices to mark the nature of the disease.

The only difficulty to this view arises in considering cases said to have their origin in injury to the head; but as we know little but the results of brain diseases, and nothing of how the changes are produced, a few such exceptions can hardly damage the general argument; moreover, the injury may be coincident with the early stage of the disease.

It is, perhaps, only natural that superintendents should take a rather one-sided view of this question, because they are forced to live in the daily observation of the peculiarities of their cases, and not only that, but of the whole *lifetime* of such cases, and of a repetition of them, for one general paralytic succeeds another year after year with unending regularity. This is different from the variety of cases that is seen in hospital practice, and doubtless superintendents would not be so ready in diagnosis had they to select the sheep from the goats in an off hand way. As it is the diagnosis is easy when any one lives among cases, and can observe for himself many trifles which otherwise would only come out, if at all, through the mind of an ignorant attendant.

Believing that general paralysis of the insane means a certain degeneration of brain, and has a pathological basis, it seems to me impossible to talk of a patient's recovery or to share the sanguine views of a physician who thinks he has cured a man by calomel baths, because the patient *appears* well nearly a year after. Every one knows there are long remissions in this disease, and I have had several patients who have kept out of the asylum for a year or two, but they inevitably come back to die. Whatever the hopes of the therapeutics of the future, I can see no reason to wander through the pharmacopœia in search of a drug to cure a disease which depends essentially on structural changes, when we know that these, at least in the brain, are not remedied by medicines. How can this disease be called an *opprobrium* to medical treat-

ment, when it is only the evidence of an exhausted brain, produced by natural laws, as much as a liver is diseased by gin drinking? The opprobrium belongs to those who, in their greedy haste to be rich, or in their unbounded vanity, their drunkenness, or other excesses, reduce themselves to this state. The brain will no more recover itself than will the vigor of youth return to the septuagenarian.

I am well aware that all cases of general paralysis can not be ascribed to the above causes, though a great many can, but every case is due to long-continued strain and exhaustion, and the disease is but the expression of the consequent degenerative change.

In conclusion, I should say that what is called general paralysis of the insane is a special form of brain disease, that it has a definite and regular course, with peculiar mental symptoms, which almost suffice to distinguish it from other forms of disease in which body and mind decay together. I have forborne to enter into a minute description of a disease only too familiar in our public asylums, because there are plenty of descriptions extant, though it must be remembered that it is only within the last twenty years that the materials for such experience have been accumulated in any quantity.—*Journal of Mental Science, July*, 1871.

AN ACT in relation to the Chronic Pauper Insane.

Passed April 25, 1871; three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. The board of State Commissioners of Public Charities are hereby authorized to hear and determine all applications which may be made to them in writing, by the county superintendents of the poor of the several counties of this State, for exemption from the operation of the tenth section of the act entitled "An act to authorize the establishment of a State asylum for the chronic insane, and for the better care of the insane poor," to be known as "The Willard Asylum for the Insane," passed April eighth, eighteen hundred and sixty-five. And whenever said board on such application shall determine that the buildings and means employed to take care of the chronic pauper insane of such county are sufficient and proper for the time being for such purpose, and shall file the same in the office of the clerk of the county making such application, then and in that case, and until such determination shall be revoked as hereinafter mentioned and provided, the

county superintendents of the poor of such county shall be relieved from sending the chronic pauper insane of such county to the Willard Asylum for the Insane, as now provided by law. Said board may at any time revoke such determination, but such revocation must be made in writing, and filed in the county clerk's office of the county making such application, and notice thereof given in writing to the county superintendents of the poor of such county, and upon the filing of the same the said county superintendents of the poor of such county shall from thenceforward be again subject to the provisions and operations of the said act.

§ 2. The board of State Commissioners of Public Charities are hereby authorized and required, whenever they shall be satisfied that the provision made for the chronic insane in any county poor-house is inadequate and unsuitable, to direct the superintendents of the poor of such county to remove the chronic insane of that county to the Willard Asylum for the Insane within ten days after receiving a written or printed notice to make such removal.

§ 3. This act shall take effect immediately.

—Dr. A. Marvin Shew, Superintendent of the Connecticut State Lunatic Asylum at Middletown, has been appointed Lecturer on Insanity in the Yale Medical School. We are always glad to chronicle the appointment of men who have had practical experience in the care of the insane in an asylum, to lecture upon Psychology, and believe that the Yale Medical School has conferred a benefit upon its students, and improved its curriculum of study, in this appointment.

—Dr. J. Parigot, who has spent the last four years in Brazil, has returned to New York, and we are gratified to learn that he offers his services and opinions in cases of insanity, in its medical or its legal aspects, whenever required. His long practical experience in charge of the insane, and his familiarity with psychology and psychiatry, commend him as a competent adviser in cases where insanity comes in question.